



MISSION: Our Mission is to enhance the Quality of Life and the Environment

GOAL: To work on issues of Natural Resources and Rural Development, with Indigenous People in mountainous and adjoining regions, addressing the challenges of conservation, livelihoods and enterprise development, through appropriate-knowledge and action, technologies, socio-economic innovations and institutions.



# TWENTY THIRD ANNUAL REPORT 2016 - 2017

# **List of Abbreviations**

ACWADAM	Advanced Center for Water Resources Development and Management	MoEFCC	Ministry of Environment, Forests and Climate Change
APFW	Asia Pacific Forestry Week	MoU	Memorandum of Understanding
APPCL	Aadhimalai Pazhangudiyinar Producer Company Limited	NABARD	National Bank for Agriculture and Rural Development
ASHA	Accredited Social Health Activist	NABL	National Accreditation Board for Testing
AT	Appropriate Technology programme		and Calibration Laboratories
ATREE	Ashoka Trust for Research in Ecology	NBR	Nilgiri Biosphere Reserve
	and the Environment	NCF	Nature Conservation Foundation
CDD	Consortium for DEWATS Dissemination	NEERI	National Environmental Engineering
CFR	Community Forest Reserve		Research Institute
CFR	Community Forest Rights	NESFAS	Northeast Slow Food and
CHW	Community Health Worker		Agrobiodiversity Society
CMS	Catalyst Management Services	NFLC	Nilgiri Field Learning Centre
CSR	Corporate Social Responsibility	NGO	Non-Governmental Organisation
<b>DEWATS</b>	Decentralised Wastewater Treatment	NNHS	Nilgiri Natural History Society
	Systems	NTFP	Non-Timber Forest Produce
EBR	Edhkwehlynawd Botanical Refuge	NTFP-EP	Non-Timber Forest Produce-Exchange
EDC	Eco-Development Committee		Programme
EDS	Ecological Development and Security	ODK	Open Data Kit
FAO	Food and Agriculture Organization	PGS	Participatory Guarantee Systems
FES	Foundation for Ecological Security	PHC	Primary Health Centre
FOSS	Free and Open Source Software	PRA	Participatory Rural Appraisal
FRA	Forest Rights Act	SSC	Species Survival Commission
FRRO	Foreigner Regional Registration Office	STR	Sathyamangalam Tiger Reserve
GIS	Geographical Information Systems	SULi	Sustainable Use and Livelihoods (SULi)
Gol	Government of India	<b>TD F</b>	Specialist Group
GoTN	Government of Tamil Nadu	TDF	Tribal Development Fund
GPS	Global Positioning System	TBGP	Tamil Nadu Biodiversity Conservation
IFR	Individual Forest Rights	TNFD	and Greening Project
IIFM	Indian Institute of Forest Management	TNUSSP	Tamil Nadu Linhan Sonitation Support
IIHS	Indian Institute for Human Settlements	1140335	Tamil Nadu Urban Sanitation Support Programme
IP	Indigenous Partnerships	TSU	Technical Support Unit
IT	Information Technology	VFC	Village Forest Council
IUCN	International Union for Conservation of	VINNS	Visakha Jilla Nava Nirmana Samithi
	Nature and Natural Resources	VSS	Van Samrakshana Samiti
JFMC	Joint Forest Management Committee	WASH	Water, Sanitation and Hygiene
KFD	Kerala Forest Department	WFTO	World Fair Trade Organisation
LAN	Local Area Network	WRCS	Wildlife Research and Conservation
LFE	Last Forest Enterprises	***************************************	Society
MAWS - GoTN	Municipal Administration and Water	WWF	World Wide Fund for Nature
	Supply Department, Government of	YELP	Youth Environmental Leadership
-	Tamil Nadu		Programme
MGNREGS	Mahatma Gandhi National Rural		-0

**Employment Guarantee Scheme** 

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### F O R E W O R D

# YEAR OF CHANGES & NEW INITIATIVES

Keystone Foundation is on the threshold of completing 25 years of work, engagement and learning in the Nilgiris Biosphere Reserve. It comes with a mixed bag. Some good and some could have been better. Human Resources Development has been a key common thread that has been running throughout the year across all programmes, units and organizations. Despite all systems, constant engagement, seeing the big picture and working on the local opportunities – mentoring, understanding, talking, listening, providing new ideas and situations – that does not stop. A sense of déjà vu sets in.

With experience and time of 25 years, one realizes, even with new aspirations, new ideas and programmes, one has to deal with people, their perceptions, and their baggage and how does one turn that into a meaningful challenge and make it better is the key.

One of the biggest things this year has been the restructuring of the programmes at Keystone Foundation. It's been brilliantly conceived using an inclusive process taking inputs from all sections of staff through "Retreats" – some called it the Dream Sessions. From seven thematic groups, we have metamorphosed into 11 groups, each having space, depth, aspirations and trajectories for proposed relevant work.

Nilgiris Field Learning Centre – the collaboration between Cornell University & Keystone Foundation has grown significantly. Progress, learning, getting the systems right, anticipating problems, placing new ideas and goals has been an exciting journey. It's a field – class room / space that comes to the forefront

every year from January to May, and we all pool our skills to create new art, observe and absorb new ideas, adapt, orient and this interaction makes us richer, candid and reflective.

On a sad note, we lost Sam and Babu - both from the Nilgiris. Sam was a key thinker at Keystone Foundation. He was brilliant, creative and ahead of his time. We used to joke that anyone who came to Keystone, after they met Sam, felt that they knew very little about their subject and area of expertise. We have lost a brilliant mind and a senior person in Keystone who understood the linkages and was a clairvoyant. Babu, field assistant with Water Resources programme, was responsible for the excellent rapport with the community in Coonoor. Both Sam and Babu are deeply missed by all at Keystone. More about them is found in a section called Birds of Passage' in the homepage of our website.

Changes have taken place as Sneh finally went for a year's sabbatical and spent time in Auroville at



Pichandikulam Forests, and is back with new energy and vigour.

Both ENDS has been one of our longest, trusted partners since more than a decade. We have worked on several projects, new initiatives with their whole team – Ecosystem Alliance, Climate Change, Adaptation and Save Western Ghats. During this year, we have partnered with them on the People & Nature Fund, 'Upholding Human Rights – Bridging the Gender – Environment Divide' and 'Indigenous Women's Rights on Resources' initiatives.

We thank Paul Wolvekamp, Deputy Director and Danielle Hirsch, Director of Both ENDS and all other team members for keeping this strong partnership going. Together we have able to achieve global standards in new insights, project management and crosscutting and multi-disciplinary approaches in Livelihoods and Biodiversity Conservation and Management in India and South and Southeast Asia through the Non-Timber Forest Produce network.

Our partnership with IIHS (Indian Institute for Human Settlements) has been strong, with the Tamil Nadu Urban Sanitation Support Programme (TNUSSP) in Coimbatore and their work on Climate Change Adaptation in Semi Arid Regions of India & Africa.

Strength, new ideas, initiatives have come from the close networking, integration of all our institutions – we have created crosscutting teams and think tanks to bounce ideas, approaches from each other. We are a 100 + including all our institutions.

The Board of Trustees initiated a whole new process of reviving a Board of Advisors; we have four new people – who will advise us on Livelihoods, Conservation, Rural Development, Water and Communications.

We look forward to this new stream of ideas and processes.

On the funding side, this year has been tough. Several rejects, but hope of new ones keeps us going. One of the successful network projects is the People & Nature Fund where groups in Central and Eastern India working on mining issues are supported with small grants for innovation on the ground. Similarly, another small grants facility focuses on gender and environmental justice and supports grassroots groups across India.

We wish to thank all the communities with whom we work, our energy-filled team members, our network partners, our donors - Both ENDS, Amsterdam, The Netherlands; Cornell University, USA; Conservation International, USA; The Swallows and Future Earth, Sweden; Department of Science & Technology, Government of India; Arghyam, Bengaluru; Welthungerhilfe (WHH), Germany; Indian Institute of Human Settlements, Bengaluru; Non Timber Forest Produce Exchange Programme (NTFP-EP), Manila; Rabobank, The Netherlands; and the Embassy of Netherlands, New Delhi.

Our gratitude to the Board of Trustees to constantly steer us, inspire and listen to our journeys.

We thank the District Administration of the Nilgiris, Coimbatore and Erode in Tamil Nadu, Chamrajnagar in Karnataka, and Malappuram in Kerala; and the Forest Departments of Tamil Nadu and Kerala. Our close partnership and collaboration over the decades with the Government, Civil Society, Academia and Private Sector has yielded interesting results, where replication, scaling up and linking to other partners in India and abroad is happening.

### **Pratim Roy**

30th March 2017

Keystone Foundation, Kotagiri, The Nilgiris, Tamil Nadu





# **CONSERVATION**

Conservation's focus this year was on biodiversity research and strengthening native species nurseries, besides reaching out to the community through conservation education and village elder programmes.



### **Native Species Nursery**

Three native species nurseries located in Kotagiri, Punanjanur and Nilambur continue to be functional. Two new nurseries have been set up this year in Gali Dhimbam and Bangalapadigai. Over the year, around 2500 saplings of 101 species including medicinal plants were raised in the three nurseries. About 1454 saplings were planted

at Kodamalai, Recovery Park (Ketti Panchayat), Ulavarsandai-Coonoor (via Clean Coonoor Campaign), Berhatty (Coonoor) as part of wetlands/spring/shola restoration work this year. Members of the Coonoor Garden Club had visited the nursery at Kotagiri to know more about native species that can be planted in their gardens and lands.



Training to set up nurseries was given to forest officials at Vaniyampuzha and 12 community members at Palakayam (Nilambur) Barefoot Ecologists Hasanur. A nursery with a mix of native species, fruit trees and spice trees has been set up in Bangalapadigai. In collaboration with NNHS, nurseries were set up at Blue Mountains School (Udhagamandalam) and at Veritas Vista (Barracks, Coonoor). World Environment Day was celebrated with tree planting in Kodamalai, Udhagamandalam and Kotagiri. All saplings planted in the past years and the Canarium strictum planted in a private land four years ago showed good survival rate with growth up to 7-8 metres and a girth of 45 cm.

### **Conservation Education**

Conservation Education is being conducted for children of various ages and backgrounds from traditional indigenous communities from rural and urban backgrounds. These awareness and education activities are conducted in government tribal residential schools, Keystone campus, and in the villages through school programmes, village elder programmes, summer camps, exposure visits and the NNHS half-yearly newsletter which has a section in the local language. This year, Conservation Education conducted 23 sessions involving 446 students.

Table 1: Details of plants raised Apr 2016-Mar 2017

	Kotagiri	Punanjanur	Nilambur
No. of species	55	Forest Plants - 43	3
		Medicinal Plants - 30	
Seeds collected	Forest Plants -15	Forest Plants - 20	3
(species)			
No. of plants raised	2234	482	141
Plants in stock	2276	850	141
No. of plants sold/ distributed	1270	400	



### Village Elders Program

The Village Elder Programme (VEP) envisions the passing on of traditional knowledge from one generation to the next. Through this programme, village elders who are traditional healers, honey hunters, farmers and NTFP



collectors from different regions take the children of the village into the forest and point out and explain about local biodiversity from the point of view of their speciality. In this way, the next generation gets practical information about traditions and practices and is able to appreciate the depth of knowledge that their elders possess. The elders, for their part, are able to share their knowledge and receive the reverence that is their due. A total of 14 elders belonging to the Irula, Sholiga and Paniya communities are part of this programme. This year, 32 VEP sessions have taken place and 504 children have benefited from the programme.





### **Biodiversity Research**Conservation Stewards Programme

Conservation International's Conservation Stewards Programme (CSP) is a conservation tool for community-driven conservation. The Programme approach offers social benefits to the communities (resource users) in exchange for their demonstrated commitments to conservation activities. In October, the first phase of the Programme started with

the feasibility analysis, which is carried out to identify the conservation goals of the regions and their expected outcomes for successful implementation of CSP. The three proposed regions Sathyamangalam (Tiger Reserve), Wayanad (National Park) and Nilambur (Reserve Forest). Feasibility analysis has been carried out. The team started with a rapid assessment of the viability of the proposed



regions followed by more formal assessment through baseline data collation and documentation regarding regional demographics and landscape, mapping the three viable regions in terms of land-type, land-use, ecological significance and community types, resource use by the communities, identify regional conservation goals and the potential challenges, engage in discussions with NGOs

and local people, including farmers, as possible implementers. The team has shortlisted villages in each region for the next phase of focus group discussions and short surveys. This will be done to present and exchange conservation initiative ideas with the resource users, and with their understanding and consent, the design of the agreement would be planned.



#### Shivamoorthy, Barefoot Ecologist - Mavanatham

I was in Std VIII when I first visited Keystone Foundation for the Conservation Education programme. I remember playing games like the Food web and many other activities. We also had group activities where we had to come up with docudramas, sing songs and recite folk stories. It was an interesting programme that I enjoyed a lot. It gave me insight into our environment and how all beings are connected to each other. This made me ask my village elders for stories, names of the plants, birds and insects, and also to learn more about the place I live in. I have cherished that experience and now, years later after being trained as a Barefoot Ecologist, I am able to organise similar activities in my village for children. I can help them learn more about the forest and the culture of our people. It is a great honour and privilege for me to be able to play a part in enriching the minds of children in my village today.



### Wetland Biodiversity Assessment

Wetland biodiversity provides enormous benefits to people directly and indirectly. both The assessment is carried out to understand the diversity and richness of the plants species, birds, insects etc. in selected wetlands. It also gives us the present status and livelihood dependence of people around the wetland. The selected wetlands Eelada (Kotagiri taluk), are Upputhoti (Coonoor taluk), Thalaikundha and Bikkapathi Mund (Udhagamandalam taluk). The data would give details of the biodiversity present in the studied wetlands and the information set will also serve as a baseline for monitoring the impacts of any development or

management interventions and will enable adaptive management and evaluation of any mitigation measures put in place.

Eelada being an important wetland in the Nilgiris and the dam being an important source of water for Kotagiri town, there is a need to monitor it closely in the coming years. The Eelada wetland is similar to numerous wetlands in the Nilgiris where the catchment is highly disturbed and there is high dependence on the water supply. The biodiversity study at Eelada showed a wide variety of plants, birds, and butterflies, a list of which is being compiled into a manual of wetland flora and fauna that would help in species identification.



### Exploring Cultural Imaginations of Landscapes through Folklore

Indigenous communities of NBR possess immense knowledge of their surrounding landscapes, and this has been documented in various forms and traditions. Oral narratives are one of the more popular forms of documentation and dissemination. This project focussed on collecting narratives about the landscapes in which some of these communities reside. Folklore was collected from Irula and Sholiga communities from Pillur and Punanjanur regions respectively.

There is an immediate resemblance to some of the landscapes mentioned in the narratives, these places/landmarks still exist and can be found to this day; while approximate locations/signs of other places could not be determined. The narratives describe very different lifestyles and practices, as well as different modes of engaging with nature, and even an insight into the kinds of landscapes these stories originated in. Apart from being a repository of traditional knowledge, these narratives are

also representations of imaginations of the origins of certain species of wildlife, certain landmarks, development of new practices and beliefs, as well as alternate reasoning for some ecological phenomena.

The larger goal behind this project was to help the propagation of this particular form of traditional knowledge as well as to explore the alternative imaginations of existing landscapes to identify ideas and modes through which

conservation ideals could be highlighted. Storytellers from both landscapes were met with, and folklore was listened to by the team. The team has also begun making efforts to involve storytellers as part of the Village Elder Programme, under Conservation Education.

### 10 Years of Happy Valley

Happy Valley, just below the Keystone campus in Kotagiri, was first visited and surveyed as part of the wetlands survey in 2005. This project was supported by the Small Grants Programme of IUCN. At the western corner of Happy Valley is a landholding of about an acre belonging to the Town Panchayat. The wetland along the floor of the valley is the source of water for households living downstream and on the hillsides surrounding the valley. The source of the wetland was a spring that runs off as a small stream and vegetation was mainly invasive species like Lantana camara, Eupatorium adenophora, Cestrum aurantifolia, Solanum xanthocarpum, Ricinus communis and Pteris sp.

In 2006, the habitat restoration project in Happy Valley was begun in collaboration with the Kotagiri Town Panchayat, residents of Happy Valley and students from CSI Matriculation School and St. Mary's School. In 2016, ten years later, the saplings have grown into a small shola patch harbouring habitat for birds and animals. At present, about 30 different species of native plants, 10 species of birds, 3 species of mammals have been recorded in the restoration site. In addition to the increase in biodiversity, the availability of water during the summer season has also increased, as also the quality of water in the spring. The spring is now perennial and the wells have water all the year around, this despite the fact that the number of wells has almost doubled since restoration activity was begun in 2006. The restored shola forest is being used as a 'Living Lab' bringing in students from different places for Conservation Education Programmes and bird watching.

#### **Publication**

Sholiga Jana Vanaahara: A booklet documenting wild foods of the Sholiga community. This has been produced in their native language using the Tamil script and is the latest in the series of publications documenting traditional knowledge of indigenous communities.

#### **Workshops**

- Aradukuttan attended a training on nursery grafting techniques at Kerala Agricultural University, Mannuthy, Thrissur.
- Abhishek KR was in Pichandikulam Reserve Forest, for a monthlong workshop on Ecovillage designs
- Dr. Shiny Rehel, along with Marimuthu and Mala of LFE, conducted a training at Kolikkarai and the Sathyamangalam Field Ecology Centre in Arepalayam for honey hunters and beekeepers on the basics of pollination biology.





# **LIVELIHOODS**

Livelihoods works towards enhancing food security for the community members and food sovereignty of farmers by strengthening village level institutions and promoting traditional crops.



Livelihoods and Environmental Governance programme focused on strengthening foundations this year. The biggest focus was the revival of traditional farming by the communities where they could support each other with indigenous varieties of seeds collected and shared between them. The programme team helped them prepare a

farming-plan for every agriculture season and also encouraged and strengthened community groups. While work has been greatly hampered by local security issues in a number of areas, there are glimpses of hope with many farmers returning to traditional farming motivated by the indigenous food festivals conducted in different landscapes.



### **Organic Agriculture**

Mixed Farming: In 2016-17, a total of 48 acres of farmland in 11 villages have been sown with millets (thenai, samai, ragi), maize, pumpkin, mustard, amaranthus, avarai and thovarai. Thirty six farmers from nine villages in the area have been provided seed grain from the Samaigudal Seed Bank. This is the first time that these villages have gone in for a focused cultivation of this intensity. For Vagapanai, one of the nine villages, this is particularly important because this land had been lying fallow or with minimal cultivation for the past 14 years.

Harvest in Konavakkarai was satisfactory for all crops except samai. The farmers here also grew chilly, brinjal, onion, beans, tapioca

and sweet potato in their millet fields. In Pillur, 1500 kg of organic bananas was harvested. Despite the very bad rainfall this year in Aracode and Pillur, almost all the millet crops except thenai and makkacholam (maize) survived. Analysing maps generated by Forest Rights Committees for filing claims, it was understood that more than 60% of available land are left unused for various reasons, and so the team is promoting commercially viable crops like pepper, coffee, nutmeg, cinnamon, etc. in such fallow lands.

Leveraging NREGS funds for agriculture development: The Mahatma Gandhi Rural Employment Guarantee Act (MGREGA) visualized investment of public money for development of rural infrastructure including land and water resources. In 2016-17, Rs 5,00,000 of NREGS funds have been leveraged to develop land for mixed cultivation in Banglapadigai village.

Tribal Development Fund (TDF)-NABARD: **Efforts** are on to mobilize funds from NABARD under TDF for the development of fallow land within the tribal patta lands for select villages in Aracode and Konavakkarai in the NBR. A survey of 240 land-holding farmer families and 25 landless families in 17 villages has been completed with the support of community members as part of selection of beneficiaries for this project.





### Participatory Guarantee Systems (PGS)

Newenergyhas been put into strengthening the PGS organic certification process among tribal farmers in Pillur, Hasanur, Aracode and Konavakkarai and 15 groups which have been revived. Capacity building was done on organic principles, bio-input preparation, and cultivation practices. The PGS farmlands were surveyed with the help of GPS and detailed maps have been prepared.

Keystone has engaged with PGS-Organic Council member organisations like Indian Institute of Rural Development (IIRD) and Timbaktu Collective for a 3-year programme of multilayer trainings and hand holding schedules for Living Farms in Odisha, Centre for World Solidarity in Jharkhand and Development Research Communication and Service Centre (DRCSC) in West Bengal to enrol 2000 PGS certified farmers.

### **PGS Groups & Capacity Building Trainings**

Area	No. of Crops	No. of Families Farming	No. of Trainings Conducted	PGS Certified Organic Groups
Aracode	7	43	12	Coffee, spices, silk cotton, millet
Konavakkarai	4	26	4	Coffee, spices, silk cotton
Hasanur	3	13	4	Millets and cereals
Pillur	1	5	1	Pulses, cereals
Total	15	87	21	



### **Trainings**

Organic input preparations: Training farmers to prepare organic or bio-inputs like bio-manure (Panchgavyam and Amuthakarasal) and bio-pesticides (fish amino acid and leaf preparation) and awareness on land and soil conservation to farmers' group members in different areas was a priority this year. Six trainings for a total of 69 farmers were conducted

in Aracode, Pillur and Nilambur. Three sample trial plots between 1-2 acres in Aracode, Pillur and Vagapanai have been set aside to monitor the effect of organic inputs.

### Training on Organic input preparations

S No	Topic of training	Area	Number of participants
1	Panchagavyam, Bio-pesticide	Arakkode	19
2	Panchagavyam, Bio-pesticide	Konavakkarai	16
3	Panchagavyam, Beejamrutham	Pillur	9
4	Panchagavyam	Pillur	6
5	Fish amino Acid, Bio-pesticide	Pillur	7
6	Panchgavyam, Bio-pesticide	Nilambur	12
		Total	69

Value addition of NTFP and farm based products: A total of 142 persons (92 female and 50 male) have been trained through 7 trainings on value addition of amla, wild ginger, honey and beeswax, as well as pickle making and 2 capacity building trainings on pricing of products and maintaining registers. As a result of these trainings, 3 NTFP micro processing units have been set up in Nilambur, one of which is run by a group of 11 widows. Gram Sabha members of five different settlements in Nilambur were among those who received training in NTFP processing and management.

### Wild Foods Festival at Keystone

The Wild Foods Festival was held at the Keystone campus in January 2017 where indigenous people from seven areas in the Nilgiri Biosphere Reserve gathered to celebrate their culinary heritage and Terra Madre Day. Almost 300 people attended the festival. Terra Madre Day is celebrated on December 10th every year, but this year circumstances in Tamil Nadu had us postponing celebrations by a month. The event began with a rousing performance by a group of men belonging to the Bhumij community of Jharkhand who performed their traditional dance — Firkal.

The stalls at the Wild Foods Festival were inaugurated by community members from each area and the participants of the NTFP-EP Regional Meeting that coincided with the festival. The indigenous communities from Aracode, Pillur, Sigur, Punanjanur, Hasanur, Konavakkarai, and Nilambur had gathered leaves, shoots, fruits and tubers from the forest and prepared into dishes that they have been consuming for generations.

There were different preparations of pickles and keerai (greens). Millets were also presented in a stunning variety. While the Hasanur stall displayed ragi murukku and thattu vada, Punanjanur presented ragi roti (flatbread), and Sigur gave us ragi mudde (steamed ragi balls). There was thenai rice, samai payasam and thenai puttu. Amaranthus seeds were displayed as pori (puffed) and vadai. All areas showcased tubers of noorai and rheyaa (Discorea sp) which are important seasonal supplements to their diet. There was an amazing range of flavours from bland to spicy to bitter to sweet and the display plates had to be refilled again and again.











### **Group Strengthening**

Village Savings Groups (VSG)

35 village savings groups are functioning in five areas and this is the first time that village level savings groups are addressing overall needs of the community. A total of Rs 3,26,422 is being maintained by these groups in local banks for their needs.

### **Exposure visits and Trainings**

Keystone organized an exposure visit for a group of 30 organic farmers (also part of PGS groups) from Hasanur, Aracode, Konavakkarai, Pillur and Sigur along with five members of Keystone's Livelihoods team to Thrissilery village in Wayanad in August 2016.

### Village Savings Groups

Area	Number	No. of members			
	of groups	F	M	Total	
Aracode	4	28	26	54	
Konavakkarai	3	22	43	65	
Nilambur	7	75	59	134	
Pillur	9	28	51	79	
Sigur	12	149	55	204	
Total	35	302	234	536	



# INDIGENOUS PEOPLES' PROGRAMME

This year the Indigenous Peoples' Programme focused on understanding gender balance within indigenous communities and the impact of the community newsletter and community radio.



### Community Newsletter -Nilagiri Seemai Sudhi

The Nilagiri Seemai Sudhi (NSS) successfully completed its 10th year in 2016. The newsletter has published articles on ceremonies, births and deaths, traditional knowledge, human wildlife interactions, traditional rituals, arts and crafts, festivals,

and pullouts on rights-based information - Forest Rights Act, Atrocities Act, Human rights, Child rights, Consumer Rights, Right to Information, etc. since it began circulation in 2006. One thousand copies of each issue have been printed every quarter and distributed to the communities.



This the newsletter year, conducted a readership survey in Kotagiri, Coonoor, Sigur, Hasanur, and Pillur. The survey covered details of direct readers (those who purchased the newsletter) indirect readers (those who borrowed the newsletter), statistics based on sex, level of education, and income generation, and feedback on content and frequency of newsletter. The total readership was 4076 with 2972 direct readers and 1104 indirect readers. Almost half (45%) of the readers, whether direct or indirect, were female. Based on suggestions from the community and survey results, a space has been created for children and youth, especially the girl child and the young woman, to write about their experiences and aspirations.

### Community Radio – Radio Kotagiri (90.4 MHz)

Radio Kotagiri was launched in 2013 with the aim of empowering indigenous communities of the Nilgiri Biosphere Reserve to find their voice and improve their social, environmental and economic status. Five years into this mission, the community radio is going strong with 12 hours of continuous broadcast in local languages like Irula, Kota, Kurumba, Toda and Badaga and mainstream languages like Tamil, Malayalam, Kannada etc. Besides broadcasting directly, programmes are also recorded onto CDs and sent to remote indigenous community settlements where the radio signal is not received.

Besides information giving on current topics of general interest, the programmes also give information on traditional medicinal practices, innovative ideas from the communities. agricultural information including current market price for vegetables, recipes, alcohol de-addiction, road safety, importance of exercise, etc. Special programmes for school children deal with information on environment, wildlife, animal welfare, general knowledge, and learning new languages. Interviews of school and college students are also produced enabling them to put across their opinions.







#### Science for Women's Health and Nutrition

On 8th March - International Women's Day, Radio Kotagiri launched its project, 'Science for Women's Health and Nutrition'. Supported and catalyzed by the Department of Science and Technology, Govt of India, the project seeks to explore Community Radio as a tool to reach out to marginalised women who have limited knowledge of health and bring them regular information on various aspects of the subject. This project focuses on women workers in tea plantations in and around Pudhu Kotagiri, Thirichikadi, Kaithala, and Thavittumedu villages about 8 km from the radio station.

A survey to generate baseline data in the project areas showed that a significant knowledge gap existed in the communities' understanding of even the basic aspects of health such as balanced diet, precautions against diseases and particularly the need to take care of themselves. Based on the

needs as perceived by the baseline survey, Radio Kotagiri will be broadcasting one new 30-minute programme on Women's Health and Nutrition every day for a year starting from March 2017.

Radio Kotagiri has trained 12 women from Kotagiri to conceptualize and produce radio programmes. Besides the usual debates and group discussions, the women use creative methods like radio drama and song duels (paatu-edirpaatu) to keep the listeners interested in the issues in question. One of the objectives of the project is to instil enough confidence in women of these areas to enable them to speak up about issues and develop solutions though networking, discussions and consultations. The women have already created more than 120 programmes on a variety of topics including personal hygiene and teenage health issues.

### Gender Equality Baseline Data Collection and Awareness Generation



This year saw the start of IPP's foray into understanding gender balance within indigenous communities. The programme organized gender equality discussions in five project areas to learn about the status of roles. responsibilities and limitations related to gender within the indigenous communities of the Nilgiri Biosphere Reserve, and to look into the possibility of designing necessary action based on the findings.



The programme started with an orientation meeting at Keystone campus followed by focus group discussions in Kotagiri, Sigur, Pillur, Hasanur and Nilambur. The meetings explored questions of women leadership, decision making, family roles and responsibilities, community support to single women and money management. The groups were composed of women and men above the age of 18 years.

The findings from the Gender Balance focus group meetings that occurred in five areas gave the programme an insight into community and family dynamics and highlighted changing viewpoints and opinions within the community and family as new opportunities and corresponding pressures come into existence.

### Award for *Arindhukolvom* - Kota Pottery

Radio Kotagiri won the second prize (Certificate and cash prize of Rs 20,000) in the Commonwealth Education Media Centre for Asia (CEMCA)-National Skill Development Corporation (NSDC) Community Radio Challenge "Meri Prerana Mera Hunar" for its programme on Kota Pottery. The programme spoke about Kota pottery being a unique skill practised exclusively by women from the Kota community.

The Kotas are one of only two communities in the world where pottery is done only by women. The pots are made for rituals and household use. The Kotas considered clay-extraction sites to be sacred, but as their access to these sites gradually declined, so did the art. Today, there are very few who can teach this art and very few who want to learn it. Also, the need for earthenware in the household has significantly reduced with the introduction of steel, aluminium and plastic vessels. Today, pottery is only used for ceremonies and rituals. To broaden the appeal of Kota pottery, the potters have started producing decorative items like figurines, tea cups and vases.





### **Higher Education Support**

This year, Keystone provided higher education support totaling Rs. 1,90,620 to 49 students (30 female and 19 male). Courses opted for included undergraduate and postgraduate courses in Computer Applications, Commerce, Computer Science, and Economics, Civil



Engineering, Electrical and Electronics Engineering. Diploma courses on Nursing, Medical Science and Teachers' Training were also chosen by the students.

Support was also provided to students to complete secondary school (XII Standard). Most of the students have joined private colleges this year, with the exception of two students who joined government teachers' training institutes. The criteria for education support were modified this year to give priority to orphans and children of single women.

### **Emergency Health Support**

A total of Rs 2,62,942 was used for Emergency Health Support this year. This included support to 23 individuals (5 female and 18 male) and the Cholanaickan Initiative for nutrition and medical support for the Cholanaickan community. Support was extended for expenses related to safe childbirth, road accidents, bear attack, tuberculosis, cerebral stroke, kidney disease, ear surgery, viral fever requiring hospitalisation, and abdominal and cerebral radiography.



#### Paul K. Feverabend Award

Paul K. Feyerabend Award of Rs.1,60,700/was given to Janaki S. from Vellaricombai village for her social work amongst Indigenous communities. The award ceremony took place at Keystone Foundation campus in Kotagiri on 9th January 2017 during the Indigenous Wild Foods Festival. More than 300 people from Keystone's working areas, Janakiamma's family and relatives, wellwishers and Non-Timber Forest Products Exchange Programme (NTFP-EP) network partners from India and South Asia attended the ceremony. The ceremony was covered and documented by Radio Kotagiri, All India Radio, Ooty, Doordhasan Podigai television, and Vasantham – a local television channel.

Janakiamma is a 56-year-old Kurumba elder who has emerged as a leader in her community. She has been involved over the past decade building young leadership amongst her people, working hard to promote traditional systems of governance and revive important events in the community to keep their pride and identity alive. She has helped document 28 Sacred Groves with the community and enable protection of eight critical ones. She has been involved in the mobilization of her community around issues of claims over forests. She is a Director on the Board of Aadhimalai Pazhangudiyinar Producer Company Ltd (AAPCL), wholly owned by indigenous people in the Nilgiri Biosphere Reserve.

Janakiamma has proved to be a bridge between the traditional and the modern. She supports the philosophy that "change is inevitable, but it is how we transition that matters".





# **APPROPRIATE TECHNOLOGY**

Appropriate Technology focused on reaching out to various sections of society with special attention to indigenous farmers and single women, helping them with technology designed to reduce human effort and enhance the quality of produce.



### **Apiculture**

The focus of Apiculture in 2016-17 has been on conducting trainings on beekeeping, providing outreach support to small and marginal farmers, both tribal and nontribal, seeking to incorporate beekeeping into their farming practices and continued support to tribal beekeepers. The programme conducted a number of workshops to train individuals in the basics of apiculture. The training consisted of

basic information on bees and their biology and behaviour, practical demonstration of beekeeping including maintenance and the use of equipment for honey extraction. There has been considerable interest and involvement from women's groups, urban dwellers and hobbyist beekeepers. Many organic farmers and horticulturists in the Nilgiris have begun actively integrating bees into their farming practices to benefit from pollination services.



Balan, an Irula farmer from Semmanarai village the Konavakkarai slopes, came forward to set up an apiary on his land. He contributed Rs. 40,000 and, along with a loan of Rs 37,000 from Keystone, the area was fenced off to protect it from animal attacks, especially bears. This project commenced in December 2016. This area is envisaged as an information centre complete with demonstration hives and melliferous plants for visitors interested in bees.

The team conducted a survey among tribal farmers to reinitiate beekeeping in Sigur, Pillur, Hasanur, Konavakkarai, Aracode and Punanjanur regions. About 115 tribal famers have shown interest in maintaining bee boxes in their home gardens.

Keystone is supporting them with tools, equipment, bee boxes and training. In an effort to increase the feral population of Apis cerana in the region, the farmers have also agreed to keep one hive as 'Let-Swarm Hive'. Pattarai the workshop has been very active in Apiculture support this year with the fabrication of 67 new bee boxes, observation bee boxes, hive stands and a total of more than 30 bee box components (Supers, top covers, bottom boards, top bars, and frames) to replace damaged ones to support existing beekeepers.

A total of 75 bee colonies are being maintained by farmers, mostly tribal, to ensure better fruit setting and harvest. Keystone apiaries have maintained a total of 29 bee colonies this year, 16 of which were given to farmers to support beekeeping.

On a sombre note, there was an outbreak of the Thai Sac Brood Virus (TSBV) in the Hasanur apiary which destroyed three colonies. The Sigur apiary witnessed an episode of suspected pesticide poisoning where four colonies were lost. Eight colonies were lost to elephant, bear and wild boar attacks. Flowering has been affected by poor rainfall this year and this has caused some amount of desertation with bees migrating due to lack of nectar and pollen. For the same reason, it has not been possible to divide and increase the number of colonies to replace the ones that were lost.

Training Type	lo. of beneficiaries	Beneficiary type
Introduction to Beekeeping	8	Single women
Seasonal Colony Management and		
Honey Harvesting Techniques	115	Farmers (Tribal)
Introduction to Beekeeping; Seasonal Colony Management a	nd Honey	
Harvesting Techniques	17	Farmers (Non-tribal)
Bees and Pollination Services	20	School children
Introduction to Beekeeping; Seasonal Colony Management a	nd Honey	
Harvesting Techniques	6	Hobbyist/home gardeners
Sustainable and Hygienic Forest Honey Collection & Beeswax	Value Addition 31	Tribal Honey Hunters

Activity	Tribal farmers	Non-tribal farmers	Amount in Rs.
Training in beekeeping (Introductory training)	-	11	19,500
Training in Honey & Wax value addition			
(Organised by TN-VPRC at Sedapatti, Madurai)	26	-	16,000
Training in Honey & Wax value addition (Keystone campus)	6	2	18900
Bee colonies	-	2	1,500
Bee boxes (subsidised)	2	49	93,000
Bee tools (free of cost)	7	5	3,100
Total			1,52,000

### **Skill Development Trainings**

 Women workers at the APPCL production centres were trained in handling a rack solar drier at the Pudukad centre and cabinet and tunnel driers at the Hasanur centre.





 A training was conducted on 23rd January 2017 for honey hunters from Hasanur region on sustainable and hygienic honey collection methods and the importance of maintaining the quality of honey. They were also briefed on floral phenology, pollination and the role of pollen in the life cycle of bees. A similar training was conducted in Kotagiri the next day for honey collectors from other areas in the Nilgiris. Drums, knives and ropes for honey harvesting were distributed during the trainings. The trainings and equipment were supported by Export Import Bank of India.

### **Fabrication and application of Appropriate Technology**

Leo and Justin threw themselves into the task of developing designs and producing equipment to increase efficiency and ease of use.

- To support apiculture, AT designed a honey filter with three stage (different gauge) stainless steel filter. This was fabricated and supplied to Vana Samrakshan Samithi, Kulathupuzha Range, Thiruvananthapuram. Honey transfer equipment was designed and fabricated for Last Forest Enterprises to reduce physical strain. A heating and filtering
- system was also fabricated for LFE.
- New hive stands were fabricated with water bowl attachment to prevent ants invading the bee colony.
- Raiding of bee hives by sloth bear has been increasing in recent years and 17 colonies were lost in the last 14 months.
   To counter this, work is in progress to design a bear-proof hive which is both cost effective and able to withstand a bear attack.





- An observation hive has been made and is being used for training, especially for school children.
- A square-shaped wooden mould has been designed and fabricated for making soap at the Pudukad production centre of APPCL. An appropriately sized attachment was also designed to facilitate convenient off-loading of the soap mixture into the mould by the simple process of tilting.
- A screw press soap cutting equipment was fabricated for

- APPCL Pudukad centre. This has significantly reduced the physical effort involved in producing uniform sizes in large numbers.
- Three green houses were fabricated and erected in Keystone campus. One of these greenhouses is being used for seed germination and maintaining mother beds.
- A toilet has been designed with alternative materials as part of eco-tourism structures in Kodithen Mund.
- Erik and Fanny, a French couple from Auroville, visited Semmanarai apiary and interacted with tribal beekeepers. Subsequently, they spent three days at the Sigur apiary to learn *Apis cerana* colony management practices, queen rearing and hiving of feral colonies.



Robert Leo wins the Sir JC Bose Memorial Award

Robert Leo, Deputy Director, was awarded the Sir JC Bose Memorial Award for his work in the field of designing appropriate technology. reviving traditional organic agriculture, and promoting Apis cerana beekeeping. Through his years with Keystone, he has been dedicated to reversing the damage caused by unchecked urbanisation and commercial farming. His team has designed and produced, by themselves and in collaboration with other institutions, over 40 pieces of equipment or structures ranging from gooseberry deseeder and honey extractors to solar powered dryers for hygienic value addition of forest and agricultural produce. These equipment are mostly in use at the Aadhimalai Production centres in Hasanur, Banglapadigai, Pudukad, Semmenarai, and Pillur.

The Sir JC Bose Memorial Award (earlier known as the Achievement Award) was instituted 14 years ago by the Indian Science Monitor.

### **Exposure Visits**

- Geert Gorden, a volunteer for *Inbaseva Sangam*, an NGO which promotes organic farming in Karur District and a part-time beekeeper from Belgium, visited the Sigur apiary to learn about Asiatic bee management. Mr. Geert has raised funds to train organic farmers from *Inbaseva Sangam* at the Sigur apiary.
- Loic Tridon, a student from ISA in Lille, France, interned for two months with Keystone to experiment on queen rearing techniques. He was supported and guided by Justin Raj. This was also an opportunity for Justin to refresh and review his queen rearing methods and also learn double grafting and vertical brood rearing techniques.





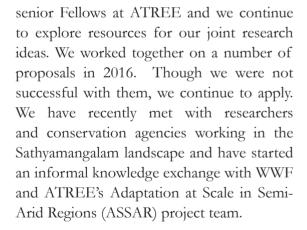
# RESEARCH

The research programme in Keystone enters its second year and continues to forge alliances and build collaborations.

The long term ecological monitoring in the Sathyamangalam area is being implemented. The community based ecological monitoring programme continues and is strengthened by new funding. The team is slowly expanding.

The focus of our research is to assess the resilience of Indian Forests and to build

an understanding as to what are the conditions under which biodiversity richness and human use complement each other. We were able to finalise and get an MoU signed with the Indian Institute of Forest Management allowing collaborations in research and experience sharing. We have been closely associated with



A proposal to establish one hectare plots in the forests of the Sathyamangalam Tiger Reserve has been formulated and we hope to have these plots up and begin the monitoring before June 2017. The plots will be a carry-over from the previous NTFP plots that were already done in 2007-11. We are hoping to get the Forest Department to participate with us in this monitoring of habitat quality.



This study will document the changes to vegetation and also provide a study site for the field ecology courses.

The Barefoot Ecologists programme in Sathyamangalam continues at a good and steady pace. The programme received funding from the People and Nature Fund and this has helped greatly to keep the momentum going. The team of 10 Barefoot Ecologists now meet regularly and decide on conservation education activities, forest nurseries of the region and human wildlife conflict issues. The team also got the new members trained and started up on the forest transects work. The Barefoot Ecologists have now been equipped with an Android tablet and this enables them to take photographs and also geotag their transects. Drought

conditions this year have adversely affected upscaling of the nurseries initiative.

In the past year the team has doubled! Malavika Narayana, Ph.d., from the University of Stirling, UK, with a background in animal behaviour has joined the team. Malavika's research on elephants in the coffee estates of Coorg has been one of the few studies on wildlife outside protected areas. Malavika joined Keystone in October to work on the Conservation Stewardship programme feasibility study. She has since come on board full

time to develop human wildlife interactions projects and to work closely with all teams in Keystone.







## Sathyamangalam Field Ecology Center

Field learning and now teaching is becoming a core activity for some of us in Keystone. Since 2015 we have been looking for a base in Sathyamangalam to start our field ecology teaching and research programme. In August 2016, we took a place on rent in Arepalayam and this has since become our office. Located at the periphery of the Sathyamangalam

Tiger Reserve this center will undertake action research programme that will explore the People and Nature connect. This center will be the field station of the research programme and will offer courses in ecology, natural history and sustainability science primarily to students, local people and forest managers. The center will act as a hub for the ecological research and conservation action

projects within the Hasanur, Kadambur and Punanajanur landscape which borders both the Sathyamangalam and Billigiri Temple Tiger Reserves.

The center was inaugurated in August 2016 and since has hosted visitors, conducted trainings on the FRA process, trainings in gender, health, water resources and barefoot ecology.



# INFORMATION & COMMUNICATIONS

Data collection has traditionally been undertaken using paper forms with the data being hand written. The forms would then be digitised, usually by entering the data into spreadsheets. This process has a number of drawbacks which were documented in a paper as part of the reflections from the Springs project. To overcome these issues, we have introduced data collection using Open Data Kit, a Free and Open Source Software. Open Data Kit implementation allows us to easily create customised data collection forms and deploy them via Android devices - smartphones or tablets. These forms allow us to not only capture responses to questions but also record location information, photos, videos etc.

To facilitate field data collection in the Water Resources programme, Android tablets have been procured and loaded with a collection of free apps that enable users to record GPS locations, photos, video and audio as well as using structured forms to collect data via Open Data Kit. ODK forms have been developed in-house and deployed to tablets and smartphones for data collection. These forms are in English and Tamil languages. Some of the volunteers are using Google Handwriting Input app to write the responses in Tamil. Data collection does not require internet connectivity, which is a constraint in remote locations. The data collected is transmitted to a server on Keystone's Local Area Network. Data being collected include baseline survey on water and sanitation, inventory and monitoring of springs and wells, rainfall data, baseline health survey, etc.

Capacity building of staff and volunteers has been a focus during the year. A hands-on training on basic GIS for the Livelihoods team was conducted using Google Earth software. Trainings as well as handholding support on GIS using Google Earth and QGIS was also provided to two members

of the TNUSSP team. Some base layers for the Coimbatore project area such as Contours and Digital Elevation Model were also produced to support their work. Volunteers and staff involved in Water Resources Programme were trained on Android tablet use and using ODK for data collection on multiple occasions.

Following from Balachander's participation in the Geo for Good User Summit at Mountain View, USA, last year, a number of collaborative efforts have been taken up with Google. A case study of Keystone's use of mapping in working on water and land resources has been published by FICCI. A short 4-minute video profiling Keystone's use of mapping technologies in its work has been produced by Google for their YouTube channel. A profile of Keystone's work using GIS has been prepared for featuring on the Google Earth Outreach website. Balachander participated in the Geospatial World Forum on 25th January 2017 at Hyderabad and presented a paper on 'Mapping and Monitoring Groundwater Resources in the Nilgiris'.

The Nilgiri Water Portal (nilgiriswaterportal.in) website has been updated with content from the Water Resources programme and is being redesigned to facilitate community participation and crowd sourcing of data. Using innovative web technologies, sliders of the remote sensing

imageries of the catchments of a few key wetlands in the Nilgiris have been deployed on the website. This enables lay users to compare remote sensing imageries from two different time periods and to infer changes in land cover that may be affecting the health of the wetlands.

Communications in the past year focussed on documenting project activities and adding elements to the home page to bring in more traffic to the website. Three new sections have been added to the homepage – 'In Focus', 'Awards and Recognitions' and 'Birds of Passage'. Information on Community Resource Persons and Advisors has been added and changes have been made to several pages to better present existing content.

Seventy two news and blog posts and eight photo galleries have been uploaded. In compliance with Government of India regulation for non-profits, completed audited accounts for 2015-16 and quarterly reports for foreign currency grants received in 2016-17 have been uploaded to the 'Financials' page. Google Analytics had been initiated towards the end of 2015-16 and it shows 7200 visitors to the website in the past year, a quarter of which are new visitors.

Twelve issues of the Keystone's monthly e-newsletter have been sent out and the number of subscribers increased from 551

to 676 in 2016-17. Regarding Keystone's presence on social media, there have been 158 Facebook posts and 14 videos uploaded on the YouTube channel. Unsolicited likes on Facebook have increased from 1026 to 1420. As of December 2016, Keystone is also present on Instagram. During the year, Communications also provided documentation support to programmes campus and field activities and events on campus like EXCEED training, NTFP regional meeting, Wild Foods Festival, etc.

Keystone has been listed in the Assocham CSR Directory 2016 with a writeup. The directory includes writeups on a number of corporates whose CSR focus matches ours, as well as NGOs with a similar mandate. It is a useful tool to find donor and implementation partners Keystone's initiatives. Keystone has been accredited by Credibility Alliance since 2010 as a measure of its transparency in functioning. The extensive process for renewal been completed and accreditation has been renewed till 2021.





# KNOWLEDGE & CAPACITY BUILDING

Bringing together people from different backgrounds and interests to understand challenges and issues facing the Nilgiris



### The Nilgiri Field Learning Centre - Class of 2017

The Nilgiri Field Learning Centre (NFLC) is a joint initiative of Keystone Foundation, Kotagiri, Tamil Nadu and Cornell University, Ithaca, New York. This collaboration brings together undergraduate students from

Cornell and adivasi students from the Nilgiris for a 15-week multidisciplinary learning experience. Three years into the programme, the learnings are new for both students and the teaching teams each year.

The NFLC provides transformative research experiences for



faculty, students, community members. and professionals. academic Cornell brings its strength in the sciences and applied fields of regional planning and policy analysis. Keystone Foundation, with rich experiences from the region on development initiatives, brings practitioner's perspective. The classroom becomes a unique space where theory meets practice and indigenous worldviews lend perspective to scientific notions.

From September 2016 onwards word was sent around the Nilgiris landscape about the student recruitment for NFLC 2017. Approximately 20 applications were received by early October.

The NFLC core team at Keystone started work on the filtering of the applications and finally 17 people were called in for the interviews. Eight of the selected students underwent two intensive sessions orientation and English language classes. We would like to thank Ms Gayatri Raveendran who volunteered to teach the students with dedication and she has since earned the name "English Ma'am" from the students! At Cornell, the recruitment process had started much earlier and we learnt by October that eight students were getting ready from their side to be part of NFLC and

also undergoing Tamil language study programme.

The NFLC 2017 programme started on 23 January 2017. We started with a week of orientation and learning observation and mapping skills. Each week had a new theme (see table). Within a five-day week, there is a field trip, which in some weeks has also been an overnight one. Field trips during the curriculum phase help students get a feel for the place, the people and work, preparing them for their five weeks of research which will include staying in many of the *adivasi* villages.





After their spring break in March, the 16 students dived into their research projects. They formed teams of two each and worked on eight different topics related to Community Wellness, Health and Nutrition, Water and Waste, Gaur Monitoring, Forest Rights Act and Fallow Lands.

### People who make the NFLC

This year Profs Neema Kudva, Rebecca Stoltzfus, Steven Wolf, Lucinda Ramberg and Andrew Wilford from Cornell have been teaching along with Pratim Roy, Anita Varghese, Snehlata Nath, T. Balachander and Mathew John from Keystone. A younger team from Keystone has been dedicatedly assisting in all the teaching and research efforts which includes K. R. Abhishek, Sharanya Das, Pavitra Vasudevan, Gokul Halan, Shiny Miriam Rehel, and Gali Prudhvi.

As a guest speaker at the NFLC we were happy to have Mr Andre Leu, President of IFOAM, deliver a lecture and answer some of the millions of questions the students had. The students met with the Coimbatore Commissioner as

part of their field trip during the urbanisation theme and again the questions never stopped.

The Administration from Keystone headed by Sarasasmeeta Pathy assisted by Ritwick Charles. ensured everything from student travel, safety, food, accommodation, dealing registration and travel and stay of all NFLC guests was taken care of. Sara spent additional time making sure the Keystone students are up to speed with their assignments and class work.

The NFLC class would not be complete without the translator and this year it was Shanmita Raghu. She translated class lectures, assisted Keystone students with assignments, prepared documentation the class process and blogged for the Keystone website about her experiences. She has found her feet in this multi-everything classroom of the NFLC.



### Summary of Research undertaken in NFLC 2017

**Forest Rights Act:** To understand the capacity of village leadership towards implementation of Forest Rights Act (FRA) in four villages in a tiger reserve region. The team mapped village resources specific to their topic, like leadership qualities and level of interest of village leader and individual villager's knowledge on FRA. They concluded that motivated village leaders and a knowledgeable community were crucial for the successful implementation of FRA.

**Fallow Lands:** A study of abandoned agricultural lands in two indigenous villages in the north eastern slopes of Kotagiri was conducted to understand why areas are left uncultivated. Through interviews of residents and mapping of fallows, they understood that permanent crops were preferred to millets or even seasonal crops. Poor rainfall emerged as a strong reason for not getting into millet farming this year.



**Gaur Monitoring:** The study of human wildlife interactions in Kotagiri, a rapidly urbanising landscape, by monitoring two identified herds of gaur (*Bos gaurus*) continues into year 2. Gaur has become a more regular feature in Kotagiri town in the past 10 years. They observed that tolerance levels were lower as compared to earlier but the team felt that these were all reactions and not responses in the absence of a long-term or sustainable plan to manage interaction with gaur.





Community Wellness: A study on the role of community health workers in two different working areas of Keystone in the Nilgiris was undertaken. They found that community health workers were a crucial link between the patient and a host of other individuals - medical personnel, village healer, and the community itself. The community health worker was also key to the patient deciding whether to approach a mainstream doctor or the traditional healer.

Health and Nutrition - Infant Feeding: A survey of the villages of the north eastern and eastern slopes of the Kotagiri area, through observing 10 sets of babies and their mothers and their nutritional intake. Along with the information received via interviews, the students also observed the role of anganwadis and the government health support schemes. They noted that mothers generally sought advice on maternity or infant feeding from older women like mother, mother-in-law, aunt or grandmother.

**Health and Nutrition:** NFLC students conducted their research in non-tribal villages in Coonoor using Keystone's baseline health survey format, studying nutrition and Water & Sanitation Hygiene (WASH) practices

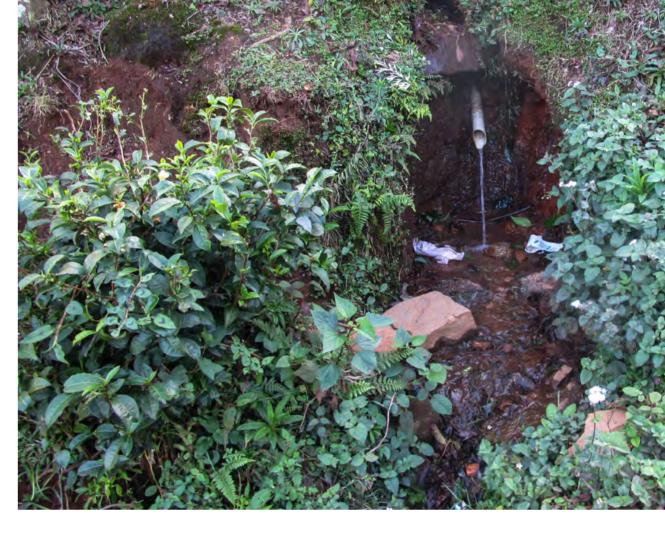
in the area, with special attention to infants. The water quality tests over the past six months as compared to the last two years show a decrease in the number of positive coliform bacteria results, but this could be attributed more to the scanty rainfall rather than improved sanitation practices.

### **Water and Waste – Waste Management:**



This year the students re-inventoried last year's villages in Coonoor town for toilets, taps, garbage pits, panchayat bins, etc. They interviewed residents and recyclers to understand the process of recycling in the areas. They followed the movement of trash as it was collected from the households and brought to Coonoor town and then moved to Mettupalayam and Coimbatore where the recycling units were situated. Some recycled plastic returns to the Nilgiris as plastic pipes, drums and sheets.

Water and Waste - WASH: This study was undertaken in two tribal settlements downstream of Coonoor town to understand the link to sanitation practices in upstream areas with special focus on infants less than two years old. Open defecation was found to be common, drinking water was only treated by sedimentation, filtering and boiling, and precautions were not taken to prevent boiled water from recontamination. Common illnesses like fever, common cold, headaches, and diarrhoea were reported to be high during rainfall periods.



# WATER RESOURCES

The Water Resources programme is focused on empowering local communities with tools to map, monitor and conserve their water resources.



This year, the programme expanded its work on mapping springs from the Coonoor river catchment to Keystone's working areas of Aracode, Sigur, Pillur, Konavakkarai, Hasanur, Punanjanur and Nilambur around the Nilgiri Biosphere Reserve (NBR). Each area with different

sets of tribal communities, culture, forests and land use had its own charm and challenges. The focus for this year was to fill in gaps in the data acquired from five Panchayats in the Coonoor watershed and to expand into collecting fresh baseline data from tribal pockets around the NBR.



The programme also suffered a setback as we lost B. Babu, who was expanding Keystone's work in non-tribal villages in Coonoor.

#### Engaging with the Community

The exercise of expanding into the tribal villages started with identifying village volunteers or community resource persons. With the help of the Keystone team, young talent was identified who were willing to learn and also disseminate knowledge into the community in all project areas. Those already volunteering with other programmes Keystone were encouraged to expand their portfolios by including water related work. The programme conducted capacity building trainings on Springshed

Management and Water Quality Testing, both in the campus and in field locations in Aracode, Coonoor. Punanianur. Konavakkarai and Hasanur. These have been group trainings or oneon-one trainings as per the need. A total of 22 individuals comprising both community resource persons and staff have been trained so far and are now actively mapping local water resources, conducting regular water quality studies, and collecting baseline data on household water usage. Periodic monitoring of springs and wells is being undertaken in Coonoor, Kotagiri, Aracode and Sigur areas. Portable water quality test kits have been deployed in Aracode and Sigur for in-depth water quality testing.



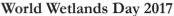
#### Water Security Plans

Drawing on the data from the baseline surveys, a few habitations in each area were identified to engage with on a priority basis. The discussions on water resource management with focus on striving towards water security have been initiated with these communities. Existing institutions such as the Village Savings Group are platforms for such discussions. Ecorestoration of springsheds is a thrust area in such planning.





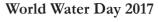






Keystone celebrated World Wetlands Day with school students from Kotagiri. We engaged with students from Satyakaathi School, International Community School, St. Mary's Home School and Vishwashanti Vidhyalaya. The students were given a talk on the Nilgiri Biosphere Reserve with emphasis on wetlands and their conservation, after which the movie "A Fragile Treasure" on the Nilgiri Biosphere Reserve was screened. Drawing competition on the theme of wetlands was conducted and a walk was organised through Happy Valley and the





On the occasion of World Water Day, 24 primary school students from Satyakaathi School and Victoria Armstrong Memorial School in Kotagiri were invited to the Keystone campus where a speech competition was organised. Students from LKG to Std V spoke on the importance of water and its conservation. Certificates and gifts were distributed to the winners and all those who participated. It was inspiring to see the younger generation engaging with such an important issue with great enthusiasm.

adjoining wetland, which is one of the main drinking water sources for Kotagiri town.

#### Anjanagiri Estate

Anjanagiri Estate, a privately owned tea estate in Aracode has approached us for help in planning and implementing water conservation measures in their estate. We hope to combine the conservation measures with periodic monitoring of water resources in partnership with the estate.



#### **Re-look at Small Hill Wetlands**

The study on small hill wetlands was done in 2006 where Keystone had looked into mapping and creating an inventory of major wetlands around the Nilgiris. In 2016-17, the water team along with the conservation team has been re-looking at all these wetlands to document changes over a period of 10 years. With advice from Mr. G.K. Bhat, Chairman, TARU Leading Edge Ltd, the methodology was updated with insights from geology and catchment mapping. The conservation team lead by Dr. Shiny Rehel and the Water Resources team have prioritized the wetlands into those that will be surveyed in detail and the others which will be briefly surveyed and their past and present status compared and analysed.

#### **Survey of Eelada Wetland**

Eelada dam and the wetland, which supplies water to the Kotagiri town was one of the high priority wetlands to be surveyed in detail. This was the first survey to be conducted as the dam water level had been falling rapidly and the Kotagiri Panchayat was being forced to search for new and alternate sources to maintain adequate supply to meet the high demand from the town. A biodiversity inventory was done in the wetland separately by the Keystone teams and the school students from The School, Chennai during their visit to Keystone. The catchment of the dam was delineated using Google Earth and a land cover map was derived using the satellite images therin. From the land cover map, a patch of wetland above the land under vegetable cultivation was identified as being the main source of water to the dam. This





### Springs as Water Sources in the Nilgiris: An Economic Perspective

In 2016, Keystone Foundation initiated a three month pilot study on the economics of water supply to off-grid habitations in the Nilgiris district of Tamil Nadu. Shanmitha Raghu, Masters in Econometrics from the University

of Madras, interned with Keystone from June to September 2016 for the study.

Three sample villages with different water supply systems like spring only, spring & well and well only source respectively were selected for the study. All disaggregated costs related to provision of water supply systems

incurred by different governing bodies were collected. The costs include planning and

execution of water supply infrastructure by Tamil Nadu Water Supply and Drainage (TWAD) Board; operation and maintenance of water supply systems by the local governing body i.e. Panchayats; and certain amount spent by the household to fill the gap in services provided by the Government.

Cost per 1000 litres of water was estimated for each village along with the share of cost being borne by the Government and individual households. It was also seen that the people in villages that were completely or partially dependent on springs spend less than the village which had only open well as the source for the water supply. It was observed that water supply systems in the study villages have longer life compared to the ones in plains where the WASHCost, India study was conducted. This is due to the large share of expenditure incurred for



operations and capital maintenance rather than investing only on new Capital Hardware. Out of the total funds allocated to provision of water supply to the villages, nearly 50 percent goes in for regular operations and minor maintenances.

The detailed report and other documents are available online at http://nilgiriswaterportal.in/

small patch of land that still had some of the wetland characteristics like standing water and wetland species of grasses is privately owned. It is important to conserve this small patch to sustain the wetland ecosystem and the water balance in the lower agricultural lands. The villagers from Kathukatty village have been identifying changes in the forest in the ridges. What were once shola forests, have now been taken over by invasives like Acacia and exotics like Eucalyptus, as per their accounts. As a followup, dynamic time sliders of satellite imagery for four different wetlands, i.e. Ralliah, Yedapalli, Thalaikundah and Eelada from two different time periods were created and shared on the wetlands section of the Nilgiris Water Portal to encourage public participation in identifying the land use changes in the catchment.

## Monsoon failure preventing springshed restoration

Due to the failure of monsoon this year, the water scarcity issue has surfaced in almost all the working villages. Even the water surplus villages with a spring and multiple wells have been reporting a shortage of water. Even though we had planned on restoring springsheds with native shola trees and grasses, the monsoon failure did not allow

this activity to take place. The demand for such habitat restoration has slowly begun in the villages. The awareness of the importance of conserving and managing a springshed or watershed is gaining ground with the demand for water increasing and non-availability of alternate sources in many parts of the Nilgiris. The restoration activity has been planned for the near future and is highly dependent on the next monsoon season. There is also demand from communities for the removal of existing exotic plantations to be replaced by native plants.

#### **Nilgiris Water Portal**

The Nilgiris Water Portal has been a place for people to engage, discuss and share on various aspects related to water in the Nilgiris. Over the last year, findings from the springs related work as well as our current and past work on wetlands have been published here. The website is being redesigned to provide a platform for the general public and other stakeholders to contribute data and content related to water resources in the Nilgiris. A Facebook page has been created to involve local stakeholders in building an informed and crowdsource data information for managing water resources in the Nilgiris.









# TAMIL NADU URBAN SANITATION SUPPORT PROGRAMME

During this year, TNUSSP engaged with community and policymakers, surveyed sanitation practices and conducted capacity building for sanitation personnel to ensure Full Cycle Sanitation for Perinaickanpalayam (PNP) and Narasimhanaickanpalayam (NNP) Town Panchayats.



TNUSSP is collaborating with IIHS, CDD Society and Gramalaya to provide the stakeholders (Residents of PNP and NNP, sanitary workers, policymakers, sludge operators, farmers, etc) with Full Cycle Sanitation where all faecal waste is contained,

collected, transported, treated and re-used in a manner that does not harm human health and well-being or contaminate groundwater and soil. To achieve this, TNUSSP is using a multi-pronged approach, engaging with the community on one hand and policymakers on



the other to understand the local sanitation situation and spread awareness regarding best practices for faecal waste management. The team also worked closely with sanitation personnel for their capacity building and to understand the everyday realities of their work. The programme is also working on the construction of a Faecal Sludge Treatment Plant in PNP.

#### **Baseline Data Collection**

- a. Technical Baseline Survey: A baseline survey of the sanitation infrastructure in PNP and NNP was conducted to understand the current situation and arrangements within different elements of on-site sanitation services.
- **b. Community/Public** Toilet

  Assessment: A four phase assessment was carried out to understand the standard

of the toilets. (1) Condition assessment; (2) User tally; (3) Exit interview; (4) Household interviews.

c. Mapping Roads and Drainage systems: Using GIS and Google Earth, most of the features (drains, roads, ward boundaries, water supply points, etc) in PNP and NNP were mapped.

### **Capacity Building for TNUSSP**

- a. Faecal Sludge Management **Toolbox:** (FSM) This workshop was a part of the FSM4 Chennai, an international conference on faecal sludge management held in February 2017. The tools covered the following seven aspects of FSM: Regulatory, Institutional, Technical, Financial. Advocacy Monitoring, Capacity Building.
- b.CDD Technical Training:

  Core programme staff and associated professionals working on TNUSSP with different partner organisations were given an overview of

urban sanitation, sanitation planning, sanitation value chain and faecal sludge management.

#### c. Shit Flow Diagram training:

A two-day training was conducted by Centre for Science and Environment on Shit Flow Diagram (SFD) with the objective of training trainers on the concept of SFD which is used to represent the route of excreta flowing through our environment, identify contained and non-contained systems, and identify the gaps along the value chain and intervene using appropriate solutions.

#### Engaging with the Community

a. Youth Champions Orientation Programme: Α one-day orientation programme TNUSSP was conducted for the selected students ("Youth Champions") of Pioneer College of Arts and Science College, Coimbatore. They will be involved in forthcoming campaigns and other community programmes of TNUSSP.



#### Natural Resource Management Study

Urbanisation is one of the major challenges to biodiversity in complex landscapes. With increasing population and consumption levels, there is an urgent need to secure areas where high levels of human activity Although and biodiversity coincide. dependence of cities on surrounding ecosystems, especially in the context of the service provided by these ecosystems in the form of air filtration, water sources, microclimate regulation, noise reduction, aiding seepage of groundwater, sewage treatment, and cultural and recreational values is well understood, little effort has been made to the

development and study of natural resources in densely populated urban areas such as the suburbs of Coimbatore city. The pressures of a rapidly increasing population affect not only immediate habitats, but also habitats and ecosystems situated further away from the source of development - a landscape complex comprising natural forests alongside urban installations encapsulates a wide variety of life, as well as intricate inter-dependencies that exist within.

Given the above scenario, an inventory of ecosystem types, mapping and investigating the biodiversity in the region, and associated threats and issues are an important component

to consider for urban planning and land-use recommendations. Thus, a hydrogeology and natural resource assessment and mapping was proposed and conducted in PNP and NNP, alongside the urban sanitation support programme. The assessments covered flora, fauna and hydrological aspects, identifying and mapping of crucial ecosystems such as forests, wetlands, lakes, rivers etc. The findings from the assessment would also assist in developing curricula focusing on biodiversity, groundwater and sanitation for educational systems as well as capacity building programmes.

- b. Health Camps: The Health Campaign was conducted for the Sanitary Workers and Water Suppliers and their family members at the Community Hall, PNP. This was arranged by the Panchayat in association with KR Hospital and facilitated by Keystone. Around 113 persons benefited from the campaign and a study titled "An Assessment on Health Campaign and Usage of Personal Protective Equipment among Sanitary Workers of Periyanaickenpalayam Town Panchayat, Coimbatore" was also conducted during the campaign.
- c. School Programme: Programmes were conducted in two schools in PNP and NNP to increase awareness on good sanitation practices and its links to health and environment. More than 1200 students participated and various activities (Skits, songs and quizzes) were conducted. The students were given mementoes and



d. World Toilet Day 2017: Meetings and rallies were conducted in PNP and NNP where school children, women from self-help groups and sanitary workers took part. The objective was to raise awareness on the linkages of sanitation with public health, and the full sanitation value chain.

#### **Engaging with Policy Makers**

In both Town Panchayats, the Working Group meetings were held to discuss action plan and progress of TNUSSP. The Advisory Committee reviewed the progress and action plan of the TNUSSP once every two months

The City-TSU, in association with the town panchayats, has prepared a draft City Sanitation Plan (CSP) analysing the present situation of water supply, sanitation, solid waste management and drainage systems in PNP and NNP and strategic plans to improve it. The first draft was presented to the town panchayats in December 2016.

#### Capacity Building of Sanitation Personnel

a. Masons' Training: As a part of the TNUSSP, a two-day training for masons in and around PNP and NNP was conducted in association with CDD Society. An advanced training programme was organized in Thiruchirapally for five masons from the first training who had shown promise.



**b. Sludge** Operators Orientation Programme: The sludge operators' welfare programme for members of the Sludge Operators' Association was organized by the City-TSU in association with the Coimbatore Sewage Transport Lorry Association.

c. Training for Sanitary Workers: A state-level training for the Sanitary Workers of Tamil Nadu was organized by Tamil Nadu Institute of Urban Studies (TNIUS). Approximately 400 workers were trained in batches of 60 at five different locations of Tamil Nadu. The TNUSSP City-TSU resource persons conducted one day of the training at Udhagamandalam handling sessions such as work obstacles, work ethics and values, dos and don'ts in solid waste management, novel approaches in solid waste management and infotainment through songs and activities.

#### **Trainings and Workshops**

Robert Leo represented Keystone during an exposure visit to Malaysia organized by the State-TSU for the urban local body (ULB) officers and partners of TNUSSP. This visit focused on the Faecal Sludge Management Practices at Malaysia.

An exposure visit was organized to the decentralized faecal sludge treatment plant at Devanahalli, Bangalore, for the TNUSSP team to gain more knowledge on the technology and its functioning. Priscilla and Vinitha attended the NFSSM organised by the Ministry of Urban Development (MoUD) on 'City's Journey beyond OD - Faecal Sludge and Septage Management'. The workshop emphasized on the importance of faecal sludge.

Priscilla represented Keystone during the two-day training workshop that was organised by the State-TSU for ULB officers on Faecal Sludge and Septage Management.

The fourth international conference on Faecal Sludge Management was held in Chennai in February 2017. Sneh, Priscilla, Vinitha and Suresh represented Keystone during the conference.

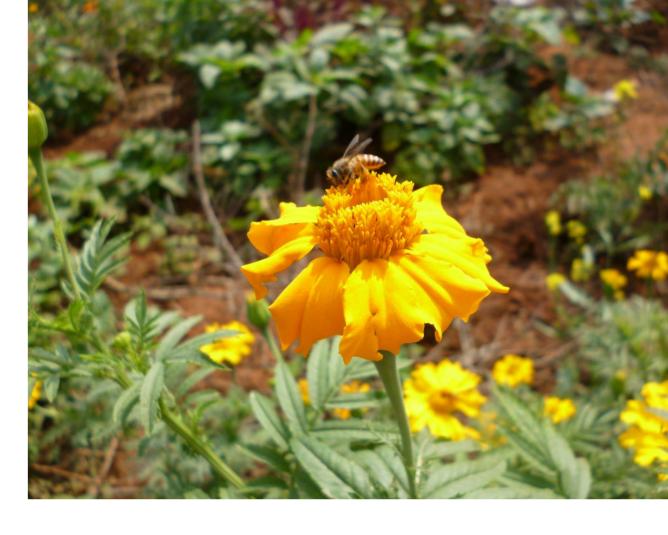
Priscilla attended the event organized by Bill and Melinda Gates Foundation on "From Senegal to India: Key Insights from the City Partners Convening in Dakar" which had members who visited Senegal share their experiences and learnings.



#### **Visits**

Bill and Melinda Gates Foundation: Visitors from Bill and Melinda Gates Foundation came Keystone to understand, monitor and evaluate the progress in TNUSSP. They visited both the town panchayats where the City-TSU briefed them on the progress of the programme. They also had discussions with various stakeholders at the town panchayats to understand their views on TNUSSP.





## **POLLINATION**

To curate available traditional knowledge on native pollinators and generate awareness regarding their importance and current status



This is a joint initiative of Keystone Foundation NESFAS, and Meghalaya (Northeast Slow Food & Agrobiodiversity Society) to create a repository of existing knowledge on pollinator species, pollination services, traditional farming practices, conserving pollinator habitats, conserving biodiversity, and the benefits that farmers and pollinators bring to each other. The Network focuses on different agroclimatic zones of

India, South and Southeast Asia, Africa and Mexico.

The other focus of the Network is to create a pool of indigenous knowledge and practical scientific knowledge that can be readily used by students, farmers, various indigenous communities, service agencies, social enterprise groups, environmentalists, and policy makers for better management of natural resources. Currently, the



Network is focused on gathering information related to India. The website can be accessed through the link http://pollinators. keystone-foundation.org/

During 2016-17, the programme has conducted three workshops exclusively on pollination imparting awareness to 45 individuals. Thirty two of the individuals were honey hunters who had special interest in foraging plants for bees. A group of 13 coffee farmers, who were part of a PGS group, were also trained on the importance of pollination in fruit setting and therefore coffee yield. Besides these trainings, pollination has been integrated into all trainings related to kitchen gardens, organic farming, apiculture, wild honey harvesting, and biodiversity monitoring that is being conducted by Keystone.





# HUMAN WILDLIFE INTERACTIONS

Understanding changes in gaur movement patterns and human-gaur interactions in a rapidly urbanising landscape



The town of Kotagiri has been witnessing many changes in the past few years, noticeably, the increased presence of gaur around various parts of the town. This presents a unique opportunity for us to understand the different kinds of interactions that occur during this delicate co-existence.

Currently, we are continuing our study from the previous years, of looking at interactions between humans and gaurin a landscape that is fast becoming urban. Students from the Nilgiri Field Learning Centre (NFLC) were actively engaged in this study, apart from interns and staff from Keystone.

The students from NFLC were engaged in surveying physical barriers present around Happy Valley, as well as interviewing residents/workers of this region. The interviews were focused mainly on people's perceptions of their interactions with gaur as well as the effectiveness of barriers erected specifically for wildlife.

This year, the team decided to expand the study area from Happy Valley to the surrounding area leading up to the main town. The expanded area is particularly important keeping in mind the two refugia present in the same area, which is also witnessing a lot of construction and infrastructure development activities.

While the focus remains on interactions between humans and gaur, the team is also actively trying to observe and understand indirect pressures affecting



interactions between humans and wildlife.

This year was also really exciting, with the in-house development and launch of our own Gaur Monitoring App. This app is aimed at citizens of the Nilgiris who would be able to help identify locations where gaur pass through, as well as getting them more involved in mitigating interactions between humans and gaur.







# ENVIRONMENTAL GOVERNANCE

Enabling communities to understand and claim their rights under the Forest Rights Act



Equipping indigenous people for better environmental governance on the lines of the Forest Rights Act was the focus of the programme in partnership with other programmes of Keystone. The team's work on the forest rights have also been appreciated by the community, but the complicated processes are still a deterrent to the communities actively claiming their rights, especially Community Forest Rights.

## Forest Rights Act (FRA) Interventions

Village level coordinators and volunteers trained by Keystone helped Forest Rights Committee members fill up submission forms and prepare maps both for Individual Forest Rights (IFR) and Community Forest Rights (CFR). In all our working areas, Forest Rights Committee (FRC) members have been trained to prepare land use maps so that

they can understand current land use patterns. The programme has developed land use maps for 52 villages covering approximately 3000 acres of land.

#### Claims under FRA

- Sigur: 773 IFR claims and 13 CFR claims from 11 villages were submitted to Divisional Level Committee. Of these, 289 IFR claims have been recognized by the District Level Committee and the rest are still being processed.
- Aracode: 89 IFR claims from 4 villages have been submitted. Support has also been extended to the Forest Rights Committees for mapping of areas being claimed under CFR in all these villages.
- Hasanur: 172 **IFR** claims submitted from three villages. Confirmation has been received of the recognition of claims

- maps which have already been prepared in 16 villages and are awaiting clearance from the Panchayat Secretary.
- Pillur: 200 IFR claims have been submitted from seven villages and work is on for 30 claims to be submitted from two more villages. The community members in these villages have formed a local forum to discuss forest rights and follow up on claims once submitted.
- Nilambur: 106 IFR claims in Nedumkayam have been reviewed and re-submitted.

#### Capacity Building

• A total of 26 trainings were held as part of strengthening the process of claiming rights under the FRA in Hasanur, Pillur and Sigur. These trainings focused on preparation of community and individual area maps, various rights under the





• The programme has facilitated discussions among FRC members of different Gram Sabhas. Five regional level meetings have been conducted in Nilambur, Hasanur, Pillur and Sigur involving members of different Gram Sabhas in each area. This is to create a common platform to discuss Forest Rights and Natural Resource Management.

#### Liaising with the Government

During this year, many of the programme's activities have been focussed on building capacity of village groups to liaison with the government and leverage available schemes and provisions strengthening their livelihoods. Mr. Sambasiva Rao, Sub-Collector - North Wayanad, Kerala, who is also in charge of implementation of the FRA in Wayanad district Nedunkayam visited both and Pattakkarimbu villages in Nilambur. He interacted with FRC members to learn the best practices of tribal Oorukkottam (Gram Sabha). He and his 28-member team had a threehour-long discussion with various committee members regarding ground realities and challenges of claim submission under the FRA.



# HEALTH & COMMUNITY WELLNESS

Empowering communities to build ownership on health and wellbeing



The Health and Community Wellness programme of Keystone took off in September 2015 and has been involved in a host of activities since then. What started with two dedicated personnel has grown with a team of volunteers – the community health workers, locally called 'nalam' workers. The reach of the programme too has extended to all the work areas of Keystone. The premise of this programme is that the lack of

quality health care, a knowledge gap in the communities regarding access to proper health care, lack of social cohesion and a sense of loss along with the rate of impact of change have an adverse effect on their overall wellbeing. The health programme seeks to understand the linkages of indigenous people's health to their culture and environment in a holistic perspective.



Despite working with the communities indigenous for decades, Keystone over two realized that there is not enough researched and validated information on the health status of these communities. Thus, a baseline survey was designed and administered in various villages in Keystone's work areas to better understand the people's perception and knowledge of health and illness. Based on the outcome of the data collected, a larger programme is to be designed.

#### Research

In the year 2015-16, Keystone collaborated with Cornell University to design the Keystone-Cornell Health survey which

attempted to establish the baseline on health in selected communities like the Irula and the Kurumba. In 2016-17 the health survey, which was administered in 50 villages, aimed to identify the communities' perception of illnesses, factors, WASH (Water, Sanitation and Hygiene) knowledge and diet diversity. Apart from that, there was an ethnographic component in the research to understand the underlying factors that influence health. The data collection has been completed and the analysis is being carried out at present.

#### **Health Support**

In the year 2016-17, the health team has extended some medical support and followed up with individuals, drawing linkages with various hospitals such as the Government Hospital in Kotagiri and Ashwini in Gudalur, coordinating with doctors for opinions/advice on individuals. The focus this year has been on people with mental health issues who have been referred to various hospitals and treatments sought.





#### **Mental Health**

This year, the Mental Health aspect of the programme took a huge leap. In the past one year, the mental health programme has been active in three working areas of Keystone, namely, Konavakkarai, Aracode and Sigur, as many individuals with mental health issues have been identified in those areas. The health team collaborated with The Banyan, an NGO working on mental health in Chennai. The Banyan who provided a team consisting of a Psychiatrist, a Psychologist, and a Social worker and medications for

the identified patients. In the beginning five patients in Kotagiri, 12 in Aracode and 11 in Sigur were identified with illnesses ranging from psychosis, schizophrenia and epilepsy. The psychiatrist from Banyan prescribed medication, which the Keystone team ensured was followed by each patient. Following the first mental health camp, Keystone along with Banyan, decided to try and streamline the Mental Health Programme with the existing District Mental Health Programme (DMHP) by the Government health systems, so that each programme could support and seek support from the other. Thus, the health team approached the District Mental Health Officer to ensure regular review and free medication. Till date, a total of seven mental health programmes have taken place with 10 patients receiving treatment and medications. In the Sigur area, the health team collaborated with Ashwini in Gudalur to seek treatment and medication for the patients. In that area, a mix of tele-consultation and physical consultation has helped the patients stay upto-date with treatment and medications.







## Community Health Workers' Programme

Over the years, Keystone has noticed a lack of awareness regarding health and wellness in the communities. As a result, ailments, especially those affecting the mind, largely go unnoticed and unaddressed until they come to a head.

To tackle these issues, the health team decided to identify community health workers or 'nalam' workers in each working area, who will become pillars of social support for the community, with regard to not only health but any issue that the villagers may face. With this vision in mind, the Keystone health team has been organising trainings on various topics such as the notion of wellbeing, mental and physical health, menstrual health, infant feeding, nutrition and the nutritional value of traditional foods. Till date there have been 12

trainings held with the community health workers.

The struggle continues with the health team with the floating population of the community health workers, which in turn affects the follow up of patients. Though the Health and Wellness programme is hamstrung by lack of funds and the timely medical intervention, it is determined to endeavour.





## **NETWORKS**

Networking is a long term process and results and outcome do not come right away. Investment in time, in discipline, in approach, in content, style, vocabulary all these help in making things work and new opportunities happen. Networking in 2016-17 was diverse with a lot of effort and energy being invested into Climate Change work, resulting in a slew of collaborations and activities extending beyond Climate Change.



Action on Climate Today (ACT), Department of International Development (DfID), Department of Environment, Govt of Tamil Nadu, Chhattisgarh State Centre for Climate Change, European Climate Fund, and Both ENDS were contacted, met and networked with in the year 2016-17 to get them interested in funding and partnering with us on the Enhanced Direct Access (EDA) process.

Climate Change Advocacy proposal to Both ENDS have gone up and down for discussions and changes. This is an initiative of Keystone Foundation and Oxford Climate Policy, UK. There was a need felt to look at energy and





power issues connected to climate change and not just restrict to climate finance through the Green Climate Fund's Enhanced Direct Access system. A new concept note and proposal is being worked out for the creation of the Climate Change Centre for Communities (4C) at Keystone Foundation.

### Non Timber Forest Produce-Exchange Programme - Asia and India

The NTFP-EP has incubated EXCEED, which co-organised with Keystone and Last Forest a course on enterprise development in August 2016. The topics covered related to marketing, branding, retailing and market segmentation. The members, from the regional network, were at the stage of building their marketing initiatives in their countries. This course provided direct inputs to their current activities of promoting NTFP marketing. More on the

regional news can be accessed at http://ntfp.org/

In India, the network continued working on exchanges training on NTFP related work. Some of the highlights were large-scale nursery raising and sale of plants by LEAF in Bastar and the formation of a tribal womens' producer company by RCDC in Bolangir, to mainly work with tree borne oils like Mahua and Kusum. Most of the partners worked with adivasi communities on the implementation of the Forests Rights Act - covering both individual and community forest claims. The network also has a quarterly newsletter called Leaf Litter, which was regularly put together through 2016. The network also held its annual meeting in Udaipur in November. This had a capacity building component on FRA, which was supported by Global Alliance for Green and Gender Action (GAGGA). The resource person from Vasundhara, Tushar Dash, talked about the situation of FRA in the country and answered key questions from partners and, shared their experiences. For Keystone, the emphasis was to look at FRA at a state level scale as well as to create examples



through claiming PVTG habitat rights. More about the network news and activities can be accessed at http://ntfp.org.in/

#### **Gender and Human Rights**

The network is in its last year of the programme which connected issues concerning women's rights and the environment across Kenya, South Africa and India. The programme aims to ensure that women in affected communities in the three countries are better positioned to claim their rights to food, water and a healthy environment. It simultaneously aims to enhance the political participation of women in decision-making bodies governing natural resources, a key prerequisite for effective implementation of these rights. In India, the project has been working with adivasi communities. Both ENDS through its partners, Keystone Foundation, Dhaatri and LIFE has been focusing on empowerment of adivasi women and community-based organisations (six field partners) in selected areas in Andhra Pradesh, Madhya Pradesh, Karnataka, Chhattisgarh and Tamil Nadu. This is to enable women to voice their concerns on rights of women over natural resources and claim their political and governance rights concerning the Forest Rights Act (FRA) and the Panchayats (Extension to Scheduled area) Act, 1996 (PESA). In 2016, the partners continued to enable this with special emphasis on work in Hospet and Panna.



Enhanced Direct Access and Keystone Foundation: Excerpts from an email from Anju Sharma, Trustee, Keystone Foundation:

"Enhanced Direct Access in India, and Keystone's role:

Multilateral and bilateral finance from global sources has not always worked as it should at the local level. One of the biggest problems with the Bretton Woods institutions, like the Global Environment Facility (GEF), and even with bilateral donors has been its disconnect with local communities and their representatives. The procedures are often too complicated, and the institutions too far away, for communities to be able to even have a say in how the funds are used, leave alone to actually design and implement projects the way they would like, with the technological advice and capacity building that they need. Instead, the way it has worked so far is through a compact between the national/state governments and the international funding agency, with little input from the people who will be most affected by projects and plans.

Enhanced Direct Access is basically a way for national governments to seek large sums of programmatic funding (not project funding), with the aim of devolving decision making on what projects and activities exactly will be funded. The EDA has been described as the Green Climate Fund's "signature modality". This is a new modality, and there is a lot of uncertainty around it - how exactly it is defined, and how far it is willing to let go. We have to push now to make sure that the eventual definition that this takes on is very ambitious, and does indeed include local decision-making, implementation, monitoring, etc. Given India's role in its creation, I think it is in our interest to make it succeed.

Keystone, Oxford Climate Policy and Both ENDS have been trying to understand how to overcome challenges and get India to submit a truly ambitious proposal for the EDA pilot. Critical actors such as Ministry of Rural Development (MoRD) and Ministry of Panchayati Raj (MoPR) are not yet included in climate finance decision-making and we tried to bring them into the conversation. We had interest from both MoRD and MoPR to work on an EDA proposal involving the National Rural Employment Guarantee Act (NREGA) infrastructure, but then they got caught up in the revamp of their systems in the aftermath of the elections. We have now put together a proposal to work at the State level instead of Centre. Our intention is to have meetings in Uttar Pradesh and Tamil Nadu as a first step, with state govt and non-govt agencies, to work on the elements of an ambitious EDA proposal, keeping in mind the particular challenges faced in the state (not just climate, but also governance related).

The eventual aim, we agree, will be to figure out a way to build and sustain the capacity of Panchayati Raj Institutions (PRIs) to take climate change into account in their planning activities, and to have access to funds for adaptation activities, and also for climate contingencies."



#### Exposure visit to the Philippines

The NTFP-EP India quarterly newsletter, Leaf Litter, was launched last year. Stories and reports from different networks were compiled and sent out. A special edition of the newsletter was also produced in January 2017. NTFP-EP India has also extended its social reach by starting a Facebook page and having daily updates.

In August 2016, Aritra visited the NTFP regional headquarters in Phillipines where he shared his experience and the work being done at the NTFP office in India. During the visit, Aritra worked closely with Earl, Communications

Manager, to help in website related activities, publications and designs and also helped Jenne and Earl with ideas for logo designs for Ati Healers.

Aritra visited organic farms, farmers and entrepreneurs who helped him to learn more about Slow Food and Organic movements in the Philippines. Great interactions with Farm Fresh Organic and Vie's coffee have helped him generate ideas for the Slow Food movement in the Nilgiris.

## Tribal Empowerment – Promoting youth fellowships

The thrust of work focused on capacity building, awareness raising and policy dialogue concerning natural resources, good governance, and constitutional provisions in scheduled/tribal areas and important laws such as FRA and PESA. This includes training of local community youth, elected representatives and involves hands-on activities in the field with very tangible immediate and positive results such as forest and wetlands restoration and livelihood projects. There will be a focus on education and health, nutritional surveys, status of safe drinking water for local communities and remedial and preventive action - especially of women and children in tribal and other backwards areas. The groups will also engage in policy advocacy and help enforce the laws relevant for these areas. The partners are based in Andhra Pradesh, Jharkhand and Chattisgarh and have been working on these issues through 2016.

## Global Alliance for Green and Gender Action (GAGGA)

GAGGA has a vision of strengthening and unifying women's rights and environmental justice agendas. GAGGA brings together the Fondo Centroamericano de Mujeres (FCAM), Both ENDS and Mama Cash, with the World Resource Institute (WRI) as strategic partner. With FCAM, a Central American grassroots fund based in Nicaragua with extensive experience in supporting women's groups as lead agent, GAGGA has set out to strengthen and unify the capabilities of grassroots groups to dialogue and advocate with and for women to claim their access to water, food security and a clean, healthy and



safe environment. It is a strong grassroots movement that can advocate for change that meets the needs of the poorest and most marginalised people, both locally and internationally.

In India, Keystone holds the small grant fund within its People and Nature Fund portfolio to support grassroots groups. The focus is to bridge the gap between women rights and environment rights groups and see the factors that can bring them together. Emphasis is placed on women led groups that follow an environment agenda. Capacity building and building a common ground for advocacy are the main emphasis of this network. In mid-2016, 20 micro and small grants have been given to groups across India for work on gender and environment issues. More information on these grants is available in the Grant Making section of this Annual Report. Members from Keystone also took part in the global planning meeting held in Amsterdam and the regional strategy meeting held in Sri Lanka.

#### **Slow Food**

The Slow Food Terra Madre – Salone del Gusto was celebrated in September 2016 in Turin, Italy. The theme for this year was 'Love the





Earth – Defend the Future' where Robert Leo and Angel (Savariammal) represented Keystone Foundation. Two products were focused on - multifloral honey produced by *Apis dorsata* catalogued in Slow Food's Ark of Taste and Nilgiris Coffee, a Presidia product. The Ark of Taste is an online catalogue of small scale native food products local to an area and deeply ingrained in its culture and history. At Terra Madre, Leo and Angel spoke about the community and folklore and traditions involving honey, ecology of the Nilgiris and importance of *Apis dorsata*, and community economics around honey.

Hot Indian filter coffee was served, with Mr. Alesscio, the coffee expert, facilitating sales and responding to visitors' queries. A workshop was also organised in Turin Square where Indian filter coffee preparation was exhibited.

## International Federation of Organic Agriculture Movement (IFOAM)

Mathew's involvement in the World Board meetings of IFOAM Organics International continued to keep him busy and active, especially since the Organic World Congress 2017 is being held in India in November 2017. Two crucial Congress Steering Committees in May and November 2016 were held, to put in place the processes to hold the Congress smoothly. World Board meetings of IFOAM during April and November, in Bonn and



Addis Ababa respectively, were part of his travel schedule. Addis Ababa was interesting because it was also held in conjunction with a workshop on Changing Food Systems in Africa.

## Participatory Guarantee Systems Organic Council (PGS OC)

In August, Mathew was in Bangkok at the invitation of Towards Organic Asia, as a keynote speaker at the 3rd Mindful Markets Asia Forum. He also held a workshop on Participatory Guarantee Systems for students of a course on social enterprise.

The Annual General Meeting of the PGS OC was held on 6th June 2016 at Timbaktu Collective, Chennakothapalli, Andhra Pradesh. After a healthy discussion, three major resolutions were adopted:

- 1. Nine new Executive Committee members were elected; the total number of members in the Organic Council is now 18. Organisations such as LEDeG, based in Ladakh and CIRHEP, based in Nilakottai became new member organisations in the OC. LEDeG and CIRHEP are represented by Lobzang Tsultim and K.A. Chandra respectively.
- 2. Kalyan Paul, Grass Roots Pan Himalayas

was elected President, C.K.Ganguly, Timbaktu Collective was elected Secretary and Robert Leo, Keystone Foundation was elected Treasurer.

3. The EC has agreed to charge a yearly fee of Rs.50 per farmer to facilitate and monitor organic-PGS processes through Facilitating Councils (FC). This will ensure financial independence for the OC and hence faster decision making.

During the meeting, other administrative decisions were taken including formally approving the 2015-16 financial audit report, participating in World Organic Congress, and monitoring development of PGS governing. The PGS OC also decided that member organisations are to submit at least five presentations to the World Organic Congress scheduled to be held in November 2017 in New Delhi.

#### **Future Earth**

Annual Regional Assembly Meeting: Kudumbam hosted Future Earth's Annual Regional Assembly, at their Ecological Farm in Kolunji, outside Thiruchirapally from 6-11 December, 2016 with participants from the member organisations in India and Sri Lanka. The Assembly meeting included networking, planning, sharing of projects





and common activities, and a cultural night. There was also a field visit to environment-friendly farmers and discussions about how to convince more people to turn to organic farming.

South Indian partners of the Future Earth network have been working with school programmes to generate awareness about healthy food and millet production. They have also been working on Participatory Guarantee Systems (PGS) certification of agricultural products. The North Indian partners shared their experiences about raising awareness regarding environment and women empowerment issues.

Future Matters – Future Earth Network Newsletter: Keystone Foundation had shouldered the responsibility to produce 'Future Matters' – the half yearly newsletter documenting activities of the Future Earth Asia network. Keystone brought out two issues of Future Matters in June and December. The newsletter carries

information, happenings and achievements from all network partners. Contributions for the newsletter came from network members in South and North India, Future Earth's Swedish Board, Gami Seva Sevana (GSS) from Sri Lanka and Future Earth Volunteers. We have increased the number of copies from 1100 to 1200 to ensure that each network partner in Asia and Future Earth Sweden Board receive 100 copies each to distribute locally.

## TNC-IIHS-KF Coimbatore Nilgiris Project

The Nature Conservancy (TNC), IIHS and Keystone have been talking, meeting and exploring a new intervention for Coimbatore city through a green lens for city development keeping in mind nature and the city's proximity to the Nilgiris Biosphere Reserve.

Urban Policy Dialogues – IIHS: The annual gathering of IIHS and all its partners this year was themed on Sustainable Development Goals in the context of Urbanization. It was good to network with several new and old resource persons. One of the IIHS Fellows, interned with Keystone from February-March 2017 on a project in Sathyamangalam.

#### Both ENDS-Helvetas, Switzerland-Oxford Climate Policy, UK-Keystone

Climate Change work has brought several partners together. Both ENDS has been our partner for several years, Rupa Mukherji from Helvetas in Switzerland, an old friend, got connected to this and we have shared lessons and approaches of working in different countries.

#### **SVYM – Engaged Cornell**

Healthy Food & Healing Plants: Swami Vivekananda Youth Movement (SVYM) is an old partner of Cornell Global Health Programme where students come to spend time at their Adivasi Hospital. This conference on Healing Plants & Healthy Food was organized by Engaged Cornell and was attended by a team from Keystone. Prof. Neema Kudva from Cornell was there, as were international partners from 13 countries.

## American India Foundation – Clinton Fellowship

AIF contacted Keystone for a partnership and placed an intern for 10 months, bringing in value added skills to the organization. After several rounds of discussion, Audra Bass is in Kotagiri and is working on setting up a Honey Portal.

### **Thomson Reuters Foundation – TrustLaw**

Keystone is now part of TrustLaw, the Thomson Reuters Foundation's global pro bono legal service. This enables Keystone to access legal assistance for legal research on laws and policy, drafting or reviewing legal agreements, protecting Keystone's intellectual property rights, creating template employment contracts for staff/volunteers or assisting with general employment/HR issues.

#### **Google- Earth outreach**

T. Balachander's work on the use of mapping for water resources such as springs and wetlands is being leveraged for advocacy and networking in partnership with Google and FICCI. Keystone's practical application of mapping in its programmes has been included in FICCI's latest publication 'Geospatial Technologies in India – Select Success Stories'. The pdf can be downloaded using the link https://tinyurl.com/Keystonegeospatial

#### **Pollinators Network**

Keystone Foundation and NESFAS, Meghalaya (Northeast Slow Food & Agrobiodiversity Society) have come together to build a platform to exchange knowledge on native pollinators and traditional knowledge from indigenous communities regarding these pollinators. A website (http://pollinators.keystonefoundation.org/) has been set up and basic information posted.

#### Landslip

Landslides and Landslip studies in Darjeeling and The Nilgiris are being led by a large consortium from UK and India; Geological Survey of India, British Geological Survey, Kings College London, Practical Action Consulting UK amongst others. The project director from UK had come to Keystone, as we have been involved in the project development through Practical Action Consulting, UK.

#### **Others**

Global Fund for Community Philanthropy – Global Summit, Johannesburg: New possibilities emerged from meeting a new constellation of partners, people who work on Community Philanthropy. This was Pratim's first interaction with this sector. There exists a potential for a rich interaction and collaboration for environment, gender, and rights-based work.

Swallows Thanapara Assignment on Management & Sustainability, Bangladesh: Swallows in Sweden asked Keystone to undertake a strategic management assignment looking at organizational issues and financial sustainability for their oldest flagship program Thanapara **Swallows** called Development Society (TSDS). Nandan (Last Forest Enterprises) and Pratim took up the assignment and submitted the report to Swallows, Sweden.

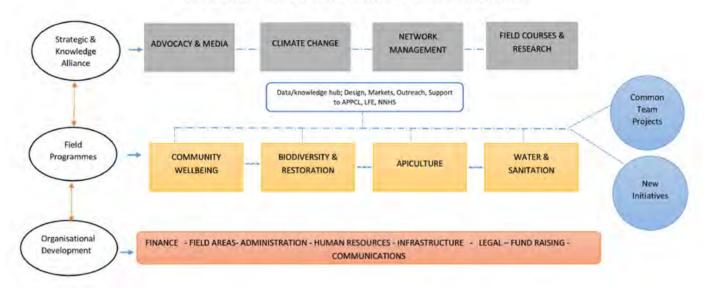
Indian Institute for Human

Settlements (IIHS) - ASSAR Meeting for Learners & Keystone's experience: Α meeting held in February 2016 in Delhi, where Anita and Pratim shared Keystone's work with the ASSAR (Adaptation at Scale for Semi-Arid Regions) especially on community indigenous knowledge. As a followup, this December 2016, the entire team of partners from ATREE, WOTR, and IIHS came to Keystone for three days to learn, share and network. This gave Keystone a good opportunity for further work and exchange.

Two proposals were rejected but new partners have been linked. One was a UNDP proposal to access GCF funds for an intervention in North East India. This was led by IFMR- Lead, Chennai, IT Power, Delhi and Keystone Foundation. The other proposal was with Cornell University and NFLC for the BMGF call on Sanitation Challenges for India.

Though both did not make it, new ideas and exchanges have been generated which will help in team building for future calls.

#### KEYSTONE FOUNDATION PROGRAMME STRUCTURE



# PROGRAMME RESTRUCTURING

With a wish to give Keystone a visionary mandate for the next decade and to create a relevant and dynamic institution a place for learning and doing.

#### **Prelude**

The main reasons we undertook this restructuring was that our older programme structure was unable to capture the new things that Keystone was involved in. We were in the past trying to tweak this to 'fit in' many new initiatives. Besides, the older work has taken form in terms of action, research papers, new institutions like Last Forest (which emerged from OMD), NNHS (which emerged from outreach work in Aadhimalai conservation) and (which emerged from sustainable livelihoods work on NTFPs and agriculture). Another important factor was the maturing of the work of

Culture and People in the last decade, an understanding that tribal culture, identity and leadership is with the communities now to take forward. Stretching the old programme structure meant closing new options and new leadership. Most of the deliberations were conducted between December and March and the new programme structure is to be put in place from April 2017.

#### Method

During Sneh's sabbatical this year, the three Directors met in Mahabalipuram for a retreat to think over things of the past and plan for the future. This was done keeping in mind personal and professional trajectories of the Directors. The ideas of handing over, building new leaders, mentoring and coaching our staff were important for the next 10 years. Building some financial security and infrastructure was discussed. The programme/functioning of Keystone and all allied institutions were reviewed and later discussed with the team members.

Subsequent retreats with senior and middle management teams from Keystone, LFE and NNHS and 'dreams' sessions with the rest of the Keystone staff helped build a new programme structure. This was also a time for reflection and reminiscing a bit on the history and qualities of Keystone. Pratim reminded us of the two concepts that form the philosophical backdrop - Keystone and Tree Fall Gap. One of the main messages was that the overall guiding goal of eco-development is the common agenda pursued by all institutions that have been incubated within Keystone and now stand as independent entities. They are linked and interconnected and need to work together for becoming effective and relevant.

We were happy and grateful to have Som, our Managing Trustee, who is somehow always with us in these defining moments.

Many programmes needed a new agenda and others needed to expand/adapt to take in new environmental issues. Some changes in community social structure and wellness, also led to more emphasis on those programmes.

The new structure defines eight Core programmes of Climate Change, Advocacy & Media, Network Management, and Field Courses & Research as those that would be done through knowledge and strategic networks. These have been initiated in Keystone – but have not been focused on or built upon with teams and regular

projects. Field situation still required us to focus on Community Wellbeing, Biodiversity Management & Restoration, Apiculture, and Water & Sanitation. Common Team Programmes and New Initiatives were added as efforts to practically implement what we believe in, work together and break out of our usual slots.

These programmes are assisted by eight Support Programmes of Finance, Field Areas, Administration, Human Resource, Infrastructure, Legal, Fundraising, and Communications.

Keystone will also function as Data or Knowledge Hub for Designs, Markets and Outreach. This will be support for APPCL, LFE and NNHS.

Scope of work of the new core programme areas as envisioned by the Keystone team is described below.

- 1. Climate Change: Keystone's Climate Change programme is currently working with the Green Climate Fund (GCF) on Enhanced Direct Access (EDA) to ensure that communities have a say in the decisions that directly impact them. The programme will also be compiling data on traditional knowledge related to climate as it applies to agriculture, water resources, seasonal forest foods, animal (especially pollinator) behaviour, etc. and developing adaption strategies; all of this leading to the establishment of a Climate Change Centre for Communities at the Keystone campus with resources on resilience that is accessible to all.
- 2. Advocacy & Media: The proposed Advocacy Platform is already working on select policy briefs starting with water (Village Water Security Plans). The Media platform is set to increase interactions with

- press (both print and digital) to ensure sensitive reporting, while building on Radio Kotagiri's rapport with the communities to turn it into a significant component of the proposed Climate Change Centre for Communities.
- 3. Network Management: Keystone is currently coordinating for India networks of NGOs related to PGS, NTFP-EP-India, GAGGA and Tribal Empowerment networks. The team proposed that we develop the People & Nature Fund and Keystone's own Grant Management Service into a Funding Hub for grassroots projects in India.
- 4. Field Courses & Research: Trainings, thus far, have been the purview of individual programme areas. Under the new structure, Field Courses & Research will have the responsibility to consolidate resources and develop structured training modules for courses that can be incorporated into school and college curricula as well as standalone courses. Besides these, a school of tribal languages, a sustainable development institute in Nilambur, and a multi-skill centre for youth has also been proposed. The prestigious Nilgiri Field Learning Course, in affiliation with Cornell University is housed under this programme and has finished three years recently. The field course is due to get an extension in 2018.
- 5. Water & Sanitation: Current localised views of linkages between water resources and sanitation are to be developed into a landscape approach where both upstream and downstream dynamics are addressed. Our current projects of TNUSSP and the

- Water project in the Nilgiris will integrate into the larger objective of safe water and sanitation in the area of work.
- 6. Apiculture: Apiculture's current focus of practical training on various aspects of beekeeping and disseminating information through the Pollinators Network and Honey Portal is set to expand into developing structured trainings and certified courses in apiculture; establishing a Pollen Library that is of practical use to LFE and Aadhimalai, creating bee sanctuaries/habitats; and building a Honey Hunters' Network. This is one of the flagship strengths of Keystone and needs focus and integration.
- 7. Biodiversity Management & Restoration: Existing activities of conservation education, biodiversity research. human-wildlife interactions, nurseries and information centres are to go hands-on with tangible conservation outcomes and impacts. These include an active field station in Satyamangalam, a botanical garden of native species, rescue centres for animals and plants, increased forest cover in the Keystone campus and linking habitat restoration to water resource conservation.
- 8. Community Empowerment: Keystone has been actively working towards the holistic wellbeing of indigenous communities. This programme wishes to address issues regarding health and nutrition, mental health, gender equality, livelihoods, rights and indigenous culture holistically.

# IDEAS IN THE MAKING

#### **New Initiatives**

New Initiatives is a new feature in the programme structure of Keystone Foundation. The programme is aimed at providing a space for members of the Keystone Community as well as associated communities to explore some of their passions and interests. Currently, this new and exciting bubble is open to volunteers from across programmes, and organisations!

We are starting with creating more efficient rainwater channels and working towards water retention landscapes on Keystone Campus in Kotagiri, as well as in Happy Valley. This effort is being made to move towards a more sustainable campus, in terms of energy, food, water and waste. Apart from improved and more efficient rainwater harvesting, we are also thinking of increasing the solar panel cover on campus, as well as experimenting with alternate forms of energy production (dynamo-based). The team is also thinking of experimenting with a fogger, a device that would help convert mist/fog into usable water.

Slow Food, a very interesting concept, is being worked on by Last Forest Enterprises at their honey themed restaurant, Place to Bee, in Udhagamandalam (Ooty). The team is also interested in working on this initiative at the Keystone Campus, and as a trial has implemented a spiral garden, growing a variety of herbs, which is open to being used by anybody. This garden has also been used as an experiment to understand the different food plants foraged on by our wildlife visitors, as well as trying alternate designs of growing food.

Work on a collaboration with Pitchandikulam Forest on a more comprehensive environmental education module is also underway. The module plans to talk about water and landscapes, specifically looking at how changes in nature of water flow, affects all aspects of life, and trying to sensitise people towards protecting and conserving this extremely precious resource all along its course from Spring to Sea.

#### **People and Nature Centre**

The People and Nature Centre is a space that is a representation of all the areas of work done at Keystone as well as a space for new areas to develop. This space aims to be a learning and research space, open to staff at Keystone as well as people and researchers from outside. The building will host a museum and archival space for information from and about the Nilgiris.



## **ADMINISTRATION**

Reminiscing 2016-17!



Administration – A mixture of responsibilities, tasks, a pinch of madness and the unceasing burden to consistently deliver with competence.

The bygone year has left many fond memories that soothe the aches and pains of a life punched with deadlines. A year filled to the brim with challenges, we had the opportunity to administer events, bring together people from different walks of life, and fulfil day-to-day obligations. This along with handling the usual flow of incoming foreign nationals complete with extensive paperwork and mandatory visits to the Foreigner Regional Registration Office.

Several events came by, for example, EXCEED OR Expanding Community Enterprise and Economic Development, a workshop with 20 participants from six Southeast Asian countries - all of them unaccustomed to the cold Nilgiris weather.

In January, we hosted the Annual regional meeting of NTFP-EP, the last day of which coincided with the Indigenous Wild Food Festival to celebrate Terra Madre Day. A logistical feat! We brought in 250 people from 10 villages in seven areas scattered around the Nilgiris to the Keystone campus to cook and share traditional wild foods. This, of course, needed extensive coordination with



the local police to assuage any fears regarding national security, given the sensitive situation in some areas. The lawn in front of Mandarae was where the stalls were set, the stage was erected and the dancing took place. The area behind the cafeteria had been prepared for three huge open air stoves where cooking began from the night before. And the water pump in the valley below had chosen that month to malfunction, forcing us to hastily make alternate arrangements. As all our events go, planning began a

month in advance, but everything (almost magically) fell into place only in the last two days leading up to the festival!

As the blinds of the financial year were coming down, Nilgiri Field Learning Centre 2016 was gearing up for the most crucial phase of the course – Field Research. As Keystone Administration, we had to be ready to tackle any eventuality, fulfil any request and provide a tranquil space in their respective field areas for the students to record and eventually publish knowledge gained during the course.

Our cafeteria had begun last year and, on an average, we provide fresh cooked hot meals to 40-50 people every day. The management realized that while Keystone was working hard to transition farmers and consumers to organic agriculture and products, our cafeteria was not as chemical free as we would like. Therefore, a decision was made to consciously move towards replacing as many ingredients as possible with their organic



the time Keystone produces the next annual report, we will have transitioned completely.

A11 said and done. as we approach Administration, every year with enthusiasm, happy to coordinate across projects and accommodate last minute schedule changes and myriad requests, because no one is more cherished in the world than one who lightens the burden of another.



# GRANT MANAGEMENT

Keystone has been chosen by numerous donor agencies over the years to manage large amounts of funds. This is because of its 23 years of experience in eco-development initiatives for indigenous communities and a strong presence within the Nilgiri Biosphere Reserve (NBR).

Keystone has partnered with various organisations such as Both ENDS based in Netherlands, the University of Geneva Switzerland, various Indian organisations such as ATREE Bengaluru, Nature Conservation Foundation, Mysuru and Ministries of the Government of India, such as the Ministry of Environment, Forests and Climate Change and the Ministry of Tribal Affairs.

Keystone has in place a set of processes that ensures that the funds sent out are able to create maximum impact on the ground. Beginning with a thorough evaluation of the proposed project and the capacity of the organisation to take it through, Keystone constantly monitors progress of the project through updates from the field and a checklist of outputs and outcomes. This checklist is matched with statements of expenses provided by the grantee every six months ensuring a smooth workflow.

#### **People and Nature Fund**

The People and Nature Fund was initiated by Keystone Foundation in the year 2016 as a funding facility for grassroots groups working on issues of environment protection and livelihoods of vulnerable communities in India.

The fund recognises the important role of grassroots initiatives as communities are the key implementers of environment and development agendas. The fund was supported by Both ENDS and the Global Alliance for Green and Gender Action (GAGGA), an alliance with the Fondo Centroamericano de Mujeres (FCAM), Both ENDS and Mama Cash; and the World Resource Institute (WRI). During the year 2016-17, the People and Nature Fund administered funds under two categories viz. Community Empowerment Support for Indian NGOs and GAGGA.

The projects supported under the Community Empowerment Support for Indian NGOs are:

SI.No	Project Name	Organisation	Partner Organisation(s)	State(s)	Grant Amount (Rs)
1.	People's empowerment through accessing rights on forests, land and water	PRERAK	Margdarshak Seva Sansthan, Paryavaran Chetna Kendra	Chhattisgarh, Jharkhand and Madhya Pradesh	57,99,000
2.	Documenting grassroots struggles in mining area	SAMATA	-	Andhra Pradesh	24,07,920

The projects supported under the GAGGA, were categorised as small and micro grants. The list of projects supported is given below

SI.No	Category	Project Name	Organisation/ Individual	State(s)	Grant Amount (Rs)
1.	Micro grant	Gender and genetic resource conservation in Western Ghats	Prakurti	Karnataka	4,50,000
2.	Micro grant	Income generation to tribal women through NTFP and minor fruits	Vikasa	Andhra Pradesh	5,00,000
3.	Micro grant	Women's economic independence through tree borne oil seed enterprises	Regional Centre for Development Cooperation (RCDC)	Odisha	5,00,000
4.	Micro grant	Foundation building for climate smart forests for food security	Rajasthan Forest Produce Collectors and Processors Group Society	Rajasthan	5,00,000
5.	Micro grant	Livelihood and social security for women and youth in mining affected communities	Sakhi Trust	Karnataka	5,00,000
6.	Micro grant	Strengthening tribal governance for conservation and management of forest for their sustainable livelihood	Gramin Samassya Mukti Trust	Maharashtra	5,00,000
7.	Micro grant	Exploring linkages between cultural memory, traditional knowledge and utility through traditional music in indigenous communities	Keystone Foundation	Nilgiri Biosphere Reserve	5,00,000
8.	Micro grant	Conservation and management of forest for sustainable livelihood through ecosystem approach	Navi Ummed Social Organization	Maharashtra	5,00,000
9.	Micro grant	Building women's leadership for natural resource rights	Prithvi Trust	Andhra Pradesh	5,00,000
10.	Micro grant	Nadukuppam Women's Hub Development	Pitchandikulam Forest	Tamil Nadu	5,06,660

The projects supported under the GAGGA, were categorised as small and micro grants. The list of projects supported is given below

SI.No	Category	Project Name	Organisation/ Individual	State(s)	Grant Amount (Rs)
11.	Micro grant	Cultural revival and environmental awareness through youth groups	Paryavaran Chetna Kendra	Jharkhand	5,00,000
12.	Micro grant	Sustainable utilisation and conservation of natural resources by tribal community through innovative technology for improving alternative living conditions	Association for Social & Humanize Action (ASHA)	Telangana	5,00,000
13.	Small grant	Asserting rights for conservation and sustenance amongst tribal women in Chalakudy River Basin	Manju Vasudevan, River Research Centre	Kerala	6,20,000
14.	Small grant	(Moving Art, Artists and Theatre Initiative) MAATI	Natya Chetana	Odisha	9,90,000
15.	Small grant	Strengthening women's role in natural resource rights	Dhaatri Resource Centre for Women and Children	Andhra Pradesh	10,00,000
16.	Small grant	Tribal livelihood resource centre for sustainable livelihood and resource conservation	Kovel Foundation	Andhra Pradesh	10,00,000
17.	Small Grant	Strengthening community forest rights and responsibilities in a protected area landscape of Sathyamangalam and BRT Tiger Reserves	Keystone Foundation	Nilgiri Biosphere Reserve	10,00,000
18.	Small grant	Green Hub, North East	North East Network	Assam	10,00,000
19.	Small grant	Strengthening women action in community forest resource management	Gram Swaraj	Odisha	10,00,000
20.	Small grant	Empowering women through biodiversity conservation and organic agriculture practices	PRERAK	Chhattisgarh	16,83,700

## **FINANCE** 2016 - 17

#### CONSOLIDATED BALANCE SHEET AS ON 31.03.2017

Amount INR '000

S.No	Particulars	2015-16 Amount	2016-17 Amount
1	LIABILITIES		
	General Fund	45,718	31,365
	Unspent Grants		25,117
	Endowment Funds	18,091	18,726
	Unsecured Loans	950	685
	Current Liabilities	2,391	2,411
	TOTAL	67,150	78,304
2	ASSETS		
	Fixed Assets	31,922	30,765
	Project and other Advances	5,915	9,674
	Deposits	17,835	19,599
	Investments	1,507	2,958
	Cash and Bank Balance	9,971	15,308
	TOTAL	67,150	78,304

CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2017			Amount INR '000
S.NO	PARTICULARS	2015-16 Amount	2016-17 Amount
1	INCOME		
		Donations	
	-Foreign Institutional Donors	50,620	58,187
	-Indian Institutional Donors	3,958	7,084
	-Others	1,370	
	Other Income	1,025	2,598
	TOTAL	56,973	67,869
2	EXPENDITURE		
	Village Development Projects	49,315	54,285
	Depreciation	2,088	2,819
	TOTAL	51,403	57,104
3	SURPLUS FUNDS	5,570	10,765

#### RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2017

S.NO	PARTICULARS	2015-16	2016-17
1	RECEIPTS		
	Opening Balance		
	-Cash and Bank	8,009	9,971
	Donations		
	-Foreign Instituional Donors	50,620	58,187
	-Indian Institutional Donors	3,958	7,084
	-Others	1,370	-
	Other Income	1,021	2,598
	Sale of Fixed Assets	70	13
	Advances Received	1,380	
	Increase in Liabilities	312	
	Received from Debtors		607
	Endowment Fund receipts	623	634
	Deposits Received	6,971	
	Loans Received		
	TOTAL	74,336	79,094
2	PAYMENTS		
	Village Development Projects	48,787	54,285
	Purchase of Fixed Assets	14,384	1,676
	Deposits and Advances Paid	643	6,014
	Investments added	75	1,451
	Loans Paid	50	265
	Liabilities paid	426	95
	Closing Balance		
	-Cash and Bank	9,971	15,308
	TOTAL	74,336	79,094

# INFORMATION BASED ON NORMS OF CREDIBITLITY ALLIANCE 1 DISCLOSURE OF STAFF BASED ON SALARY LEVELS

Amount INR '000

Slab of Gross Salary plus benefits paid to staff (INR per Month)	No of Male Staff	No of Female Staff	Total Staff
Less than 5,000	0	0	0
5,000 to 10,000	2	2	4
10,000 to 25,000	11	4	15
25,000 to 50,000	6	4	10
50,000 to 1,00,000	1	1	2
Greater than 1,00,000	0	0	
Total	20	11	31

#### 2. PAYMENT MADE TO CONSULTANTS DURING 2016-17

Amount INR '000

TOTAL ANNUAL PAYMENT MADE TO CONSULTANTS (in INR)	Number of Consultants
Less than 5,000	
5,000 to 10,000	7
10,000 to 25,000	10
25,000 to 50,000	3
50,000 to 1,00,000	4
Greater than 1,00,000	0
Total	24

# 3. STAFF REMUNERATION (GROSS + BENEFITS)

3. STAFF REMUNERATION (GRUSS + BENEFITS)	Amount INR '000
Head of Organisation (including Honararium)- 2 Persons	7,77,432
Highest paid full time regular staff	7,77,432
Lowest Paid full time regular staff	82,668

# 4. TOTAL COST OF INTERNATIONAL TRAVEL BY TRUSTEES/STAFF/VOLUNTEERS ON BEHALF OF THE ORGANISATION

Amount INR '000

NO	NAME OF STAFF	DESIGNATION	DESTINATION	PURPOSE OF TRAVEL	COST INCURRED	SPONSORED
1	Snehlata Nath	Director	The Netherlands	Global Alliance for Green and Gender Action - Project launch	32	Yes
2	Anita Varghese	Deputy Director	Hawaii, USA	IUCN World Conservation Congress	8	Partly
3	Robert Leo	Deputy Director	Italy	Slow Food - Terra Madre	67	Partly
4	Robert Leo	Deputy Director	Sri Lanka	Meeting on PGS	21	NO
5	Pratim Roy	Director	Bangladesh	Evaluation	107	Yes
6	Snehlata Nath	Director	Sri Lanka	Global Alliance for Green and Gender Action - Partners meeting	7	Partly
7	Anita Varghese	Deputy Director	Indonesia	Course on Landscape Governance	6	Yes
8	Mathew John	Director	Germany	IFOAM World Board Meeting	59	Yes
9	Mathew John	Director	Mauritius	Women's Forum meeting on Climate change	-	Yes
10	Robert Leo	Deputy Director	Malaysia	Study Tour to understand International Sanitation Practises	14	Partly
11	Mathew John	Director	Bangkok	Meeting on PGS	-	Yes
12	Pratim Roy	Director	South Africa	Global Summit on Community Philanthropy	121	Yes
13	Mathew John	Director	Ethiopia	IFOAM World Board Meeting	20	Yes
14	Mathew John	Director	France	Conference on Agri change and Sustainable Development	72	Yes

# 5. THE TOTAL COST OF NATIONAL TRAVEL BY BOARD MEMBERS/STAFF/VOLUNTEERS ON BEHALF OF ORGANISATION FOR 2016-17

Rs. 9,41,432

# **6. PROFILE OF BOARD OF TRUSTEES**

NO	NAME	AGE	SEX	LOCATION	OCCUPATION	POSITION	Remuneration & Reimbursement
1	Somanth Sen	51	Male	New Delhi	Consultant	Managing Trustee	-
2	Suprava Patnaik	54	Female	Bhopal	Professor	Trustee	-
3	Shipra Gupta	80	Female	Puducherry	Educationist	Trustee	-
4	Rita Banerji	46	Female	New Delhi	Film Maker	Trustee	-
5	Meena Gupta	67	Female	Kolkatta	Retd. Secy to GOI	Trustee	-
6	Rev. P. K. Mulley	68	Male	Kotagiri	Anthropologist	Trustee	-
7	Anju Sharma	44	Female	UK	Consultant	Trustee	-
8	John Kurien	64	Male	Tiruvananthapuram	Consultant	Trustee	-

# **TEAM PROFILE**



Mathew John Founder Director



**Pratim Roy** Founder Director



Snehlata Nath Founder Director



Anita Varghese
Deputy Director



Robert Leo Deputy Director



Sumin George Thomas
Programme Coordinator



H. R. Eswaran Programme Coordinator



**T. Balachander** Programme Coordinator



Shiny Miriam Rehel Programme Coordinator



Sarasasmeeta Programme Coordinator



**T. Samraj**Programme Coordinator



Archana Sivaramakrishnan
Programme Coordinator



N. Selvi Add. Programme Coordinator



**Gokul Halan** Add. Programme Coordinator



P. Chandran
Add. Programme Coordinator



**S. Suresh Kumar** Community Coordinator



**K.G. Ramachandran** Add. Programme Coordinator



Sharanya Das Add. Programme Coordinator



K. R. Abhishek Research Assistant



Pavitra Vasudevan Subject Manager



Malavika. H. Narayana Subject Manager



**Leena Fernandez**Manager - Communications



Aradukuttan Subject Manager



**Jeyanthi** Subject Manager



**B. Sivaraj** Subject Manager



**Mahadesh .B** Manager Research



Amsaveni Accounts Assistant



**T. Justin Raj** Subject Manager



Wilfred William System Administrator



**K. Subramani** Editor - Nilgiri Seemai Sudhi



Ritwick Charles
Admin Assistant



**Vinitha Murukesan** Environmental Engineer



Praveena S
Office Assistant



**Anantha Moorthy** Environmental Engineer



Ramakannan V Social Development Expert



Sumitha Shalini Senior Community and Sanitation coordinator



Elizabeth Prassana Social Worker



Mahendran. V Social Worker



**Vignesh** Environmental and Sanitation Analyst



Priscilla Benita Project Manager (TNUSSP)



Satheesh Chandran Village Coordinator



**Syamjith P.K.** Community Coordinator



R. Rajendran Field Assistant



**B. Babu** Field Assistant



M. Lalitha
Field Assistant



Shivanna Field Assistant



**Dinesh** Radio Assistant



**C. Sabitha** Housekeeping



K. Hari Bahadur Campus Supervisor



**Prem Bahadur**Security



R. Kannan Field Assistant



**Abilash** Radio Assistant



**Aravind** Radio Jockey



Tanvish Vishnu Radio Jockey



**Manickam** Radio Jockey



**Vibin Kumar** Radio Jockey



R.Rajesh Kumar Radio Jockey

# **CALENDAR**

# **April 2016**

- Community Wellness camp on Mental Health conducted by Keystone and The Banyan (Chennai) at Sigur and Sholurmattam.
- Anita travels to Indonesia for an International Workshop on Governance, Forests and People.
- Institute of Finance Management and Research, Chennai, visits Keystone.
- TNUSSP team attends Planning Meeting with IIHS in Chennai.

# May 2016

- Abhishek and Jeyanthi travel to Assam for the Green Hub Fest.
- Keystone Board of Trustees meet in Kotagiri.
- Mathew travels to Bonn, Germany, for IFOAM World Board meeting.
- NFLC 2016: Students give their final presentation and receive certificates of completion.

#### **June 2016**

- Mathew travels to Mauritius for the Women's Forum Meeting on Climate Change.
- Selvi and Jeyanthi travel to Chennai for a meeting at the Periyar Science and Technology Centre for the project "Science for Women's Health and Nutrition".
- Sharanya and Pavitra travel to Chennai to visit The Banyan Health Centre.

# **July 2016**

- Leo meets with Timbaktu Collective in Andhra Pradesh to discuss PGS.
- CIRHEP team and organic farmers from Dindigul visit Keystone for an exposure visit on PGS.
- Exposure visit for The Swallows team from Sweden.
- G. K. Bhat, Chairman of Taru Leading Edge Pvt. Ltd gives a talk on 'Future of Water'.
- Leo travels to Malaysia on a TNUSSP study tour to understand International Sanitation Practices.
- Mathew attends meeting with EXIM Bank in Mumbai.

#### August 2016

- EXCEED training and workshop at Keystone campus conducted jointly by NTFP-EP, Keystone Foundation, Last Forest Enterprises and Aadhimalai Pazhangudiyinar Producer Company Ltd.
- Mental Health camp conducted in Kotagiri in collaboration with The Banyan, Chennai.
- Selvi and Subramani attend the Future Earth Baseline Workshop in Bengaluru.
- Dr. C.T.S. Nair (IFS, Retd.) visits Keystone.
- Leo attends meeting with IIHS at Chennai regarding TNUSSP.
- Mathew travels to Bangkok for PGS meeting.
- Anita travels to Hawaii for the IUCN World Conservation Congress.

# September 2016

- Pratim, Selvi, Sharanya and Pavitra travel to Mysore for workshop on 'Healthy Food, Healing Plants' organised by Swami Vivekananda Youth Movement for Cornell Partners.
- Leo travels to Turin, Italy to attend Terra Madre Salone del Gusto 2016.
- Vinitha travels to Bengaluru to attend International Engineers Training on DEWATS.

#### October 2016

- Abhishek attends IFMR-LEAD Conference on Traditional Knowledge and Climate Change in Chennai.
- Leo attends WHH workshop in Kolkata.
- Leo attends Bee Conservation Meeting and Veranda Conservation Workshop organised by Kalpvriksh in Pune.
- Capacity Building and Content Generation
   Workshop for indigenous community women
   at Keystone for the project 'Science for
   Women's Health and Nutrition'.
- NFLC 2017: Boot camp for 3rd batch (Nilgiri students).

#### **November 2016**

- Mathew travels to New Delhi for BIOFACH India meeting.
- Balachander and Pratim attends IIHS meeting on Urban Policy Dialogues 2016 in Bengaluru.
- Pratim and Nandan travel to Bangladesh for Swallows assignment to evaluate Thanapara

- Rural Development Society on Finance and Management Systems and Sustainability.
- Balachander travels to Uttarakhand on Springs Initiative assignment with Arghyam.
- Mathew attends IFOAM workshop and World Bank meeting in Ethiopia.
- Leo travels to Sri Lanka as resource person for PGS training at GSS.
- Sneh attends GAGGA meeting in Sri Lanka.
- Pratim travels to Johannesburg to attend Global Summit on Community Philanthropy.
- Leo conducts Tamil Nadu Pudu Vazhvu (TNPV) - Training for Tribal Groups in Madurai.
- Mathew attends Fair Trade Forum India meeting in Hyderabad.
- Abhishek attends Eco-village Design Education Workshop at Pitchandikulam Forest, Pondicherry.

#### December 2016

- Mathew attends Agri-Chains and Sustainable Development Conference in Montpellier, France.
- Meeting on ASSAR with IIHS, ATREE and Keystone conducted in Kotagiri.
- K. Balasubramanian, Vice President, Commonwealth of Learning (CoL) visits Keystone.
- Dr. T. S. Ramkumar, General Secretary, Centre for Social Reconstruction (CSR) visits Keystone

# **January 2017**

- NTFP-EP Asia Annual Regional Meeting at Keystone campus.
- Sneh travels to Hyderabad for Gender HR meeting.
- Indigenous Wild Foods Festival at Keystone.
- Sneh and Anita travel to Bengaluru for ATREE Conference on Conservation Science and Sustainable Development.
- Balachander attends Geospatial World Forum conference in Hyderabad.

# February 2017

- Sneh attends FSM4 conference in Chennai.
- Amos Thiongo, Regional Manager, Conservation International – Africa conducts workshop on Conservation Stewards Programme at Keystone.

- Leo and Moorthy travel to Vishakhapatnam to conduct PGS training.
- Andre Leu, President, IFOAM International visits Keystone.

#### **March 2017**

- Leo, Moorthy and Arun travel to Visakhapatnam for a consultancy visit to Kovel Foundation.
- Pratim, Anita, Sumin, Mahadesha and Malavika visit (Applied Environmental Research Foundation) AERF in Pune.
- Sumin and Malavika travel to Bogota, Columbia for Conservation Stewards Programme exposure visit.
- Sneh meets with South India Women's Forum at Visakhapatnam.

#### **ORGANISATIONAL INFORMATION**

Keystone Foundation is registered under the Indian Trust Act, 1882. Registration No. 1883 of 1993

#### **REGISTERED & MAILING ADDRESS**

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#### **WEBSITES**

http://keystone-foundation.org http://lastforest.in http://nnhs.in http://www.aadhimalai.in

### **SOCIAL MEDIA**

f http://www.facebook.com/pages/keystone-foundation

You Tube http://www.youtube.com/user/keystonefound

http://instagram.com/keystonefoundation

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