



Technology Informatics Design Endeavour

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Legal and Financial details

TIDE is registered under Karnataka Societies Registration Act with the No : 131/93-94 dated 11th May 1993.

TIDE has FCRA, 12A and 80G certificates and PAN number.

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TIDE is a TIER I listed NGO with GIVE INDIA portal. Visit <http://www.giveindia.org/m-1519-Technology-Informatics-Design-Endeavour--TIDE-.aspx> to make a donation

Implementation/Scaling partners

Sustaintech India Pvt Ltd : www.sustaintech.in

MANINI SHG enterprise : www.tidemanini.com

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Figure 1: Field demonstration of Improved cook stove utilizing mulberry sticks

THE YEAR IN REVIEW

April 2016 to March 2017

Last year has been quite successful for TIDE in mobilizing funds and in delivering programs. We implemented 21 projects across the three thematic areas of Cook stoves, Energy & environment, and Women and Livelihoods.

The fantastic performance has been achieved thanks to:

- ➔ Our funders who saw value in our programs, and have been generous in supporting us while ensuring that every rupee was put to good use. We are grateful to them.
- ➔ Our partners who gave us either technology support or ground support to reach deserving communities. We are obliged to them.
- ➔ Last but not the least, our team which worked diligently and passionately in difficult terrains and circumstances to meet challenging commitments. We are proud of them.

While our performance has contributed favourably to further our vision and mission, it also sets the bar high for us. To sustain and promote this kind of growth, we have overhauled processes within TIDE with respect to program planning and management, monitoring, impact assessment and reporting. TIDE has also reviewed its personnel policy allowing us to leverage skilled and passionate human resource through different engagement models. During the year, our General body which has an advisory role increased in size from 14 to 16.

THE YEAR IN REVIEW

It is always gratifying to see our efforts recognized and one such instance was a Certificate of appreciation from Give India in recognition of our general responsiveness!

During the last few years, TIDE has been focusing on building strong partnerships to sustain our umbrella initiatives and for creating knowledge management /dissemination tools in these areas. In this regard, TIDE is honoured to continue as a CORE PARTNER with Department of Science & Technology, Government of India through our third phase of five year Core program beginning November 2016. The core support allows TIDE to build its capacity to identify and provide technology solutions for societal needs. Our VidyutRakshaka Replace is co-owned by the supported research organization World Resource Institute (WRI) allowing us to deliver a program localized for Indian context with global perspectives. We have partnered with WWF to develop content for sensitizing peer organizations and communities on biomass conservation for use by WWF and its partners. In another program led by CARE India, TIDE has developed a comprehensive curriculum on creating awareness and providing know-how to rural women in adopting improved cook stoves. We have also been able to build good CSR partnerships for some of our initiatives through clear impact propositions. These kinds of partnerships ensure that TIDE's vast knowledge in the sectors is managed well and put to good use.

The year was not without its challenges. Raising funds for environment conservation or piloting technology solutions continues to be tough, especially given the lack of human stories. With our strength being innovation, impact is not necessarily through scaling but this sometimes limits the kind of projects we get. TIDE is yet to tap into individual philanthropy, a rising opportunity in India we are told.

Our Goals for 2016

In addition to conceptualizing and delivering programs in our focus areas, we have some general goals across projects for the next year:

- ➔ To strengthen community engagement in both rural and urban areas through some systematic processes
- ➔ To leverage digital and IT solutions for knowledge management and dissemination
- ➔ To explore innovative data collection and management on natural resources that would form the baseline for future programs

THE YEAR IN REVIEW



Figure 2: GIVE INDIA's award to TIDE

In the coming year too, we hope to continue to do good with your support.

SPECIAL GUEST SPEAKER SESSION AT TIDE AGM IN 2016

TIDE was privileged to have Dr. V Raghunathan (<http://www.vraghunathan.com/>) address the TIDE general body and staff on the occasion of our 2015-16 Annual General Body Meeting. Dr V Raghunathan chose to speak about Social responsibility of Corporates, a deliberate shift from Corporate Social Responsibility (CSR). He shared about the culture of corporate philanthropy in India with real life examples.

He brought out how such philanthropy need not be defined or limited by (CSR) rules. A lively discussion ensued during which the speaker explained his simple yet powerful ground rule on ethical practices as a first step to ensure social responsibility. The theme, his discourse and the points brought out during the discussion made a powerful impact on the audience and it was an afternoon well spent!



Figure 3: Dr. V Raghunathan addressing TIDE General Body and staff at TIDE's AGM on 6th August 2016

SUMMARY OF OUR WORK DURING THE LAST YEAR

FOCUS AREA WISE EXPENDITURE DURING 2017-18

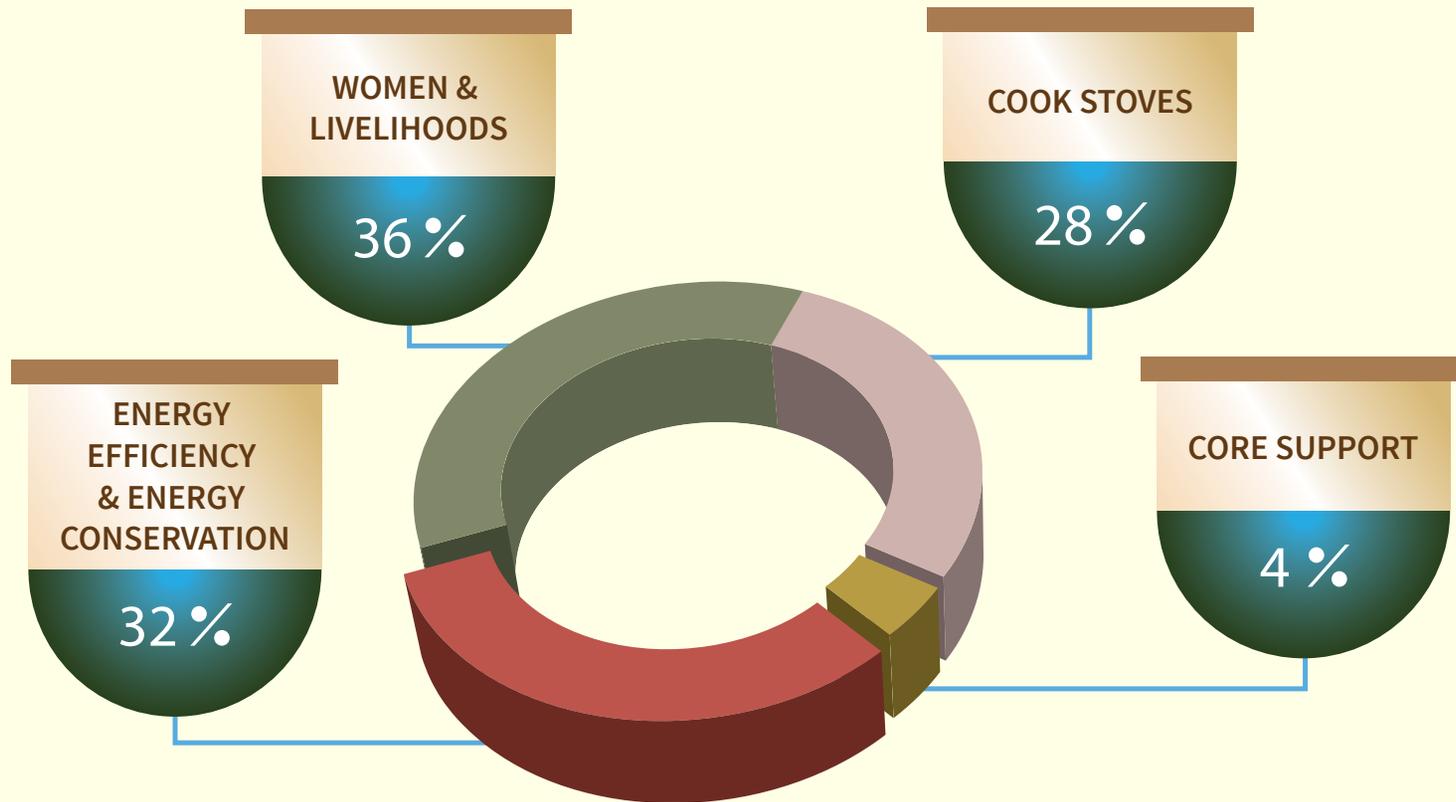


Figure 4: Expenditure break up

A SNAPSHOT OF DIFFERENT STAGES OF TIDE'S WORK DURING THE YEAR



COOKSTOVES

Adaptations to Agni stoves, PYRO stoves
 Designing solar powered forced draft stove
 Agni Stoves field acceptance
 Fuel supply chain for agro residue

Smokeless villages
 Training rural women as stove builders

Curriculum for rural women on creating awareness on Improved cook stoves, in partnership with CARE India
 Support for evolving women centred model for clean cook stoves, in partnership with CARE India
 Accreditation with Skill Council for Green jobs on Sarala stove construction
 Digital content for stove construction training

TIDE capacity building through CORE Support, WTP dormitory construction for residential training



ENERGY EFFICIENCY & ENERGY CONSERVATION

VidyutRakshaka for reducing aggregated electricity demand of communities

Vidyut Rakshaka for households

Citizen participation in energy conservation through VldyutRakshaka
 VidyutRakshaka as a novel Demand Side Management tool for energy conservation
 Keep as two points
 Keep as two points
 Keep as two points

Biomass conservation for WWF and its partners



WOMEN & LIVELIHOOD

Production & market development for value added products from millets

ECO STORE by rural women entrepreneurs

Hub & Spoke model for women enterprises with MANINI / WTP as hub

Incubating technology based enterprises

SHG based food enterprise

Technology based livelihood options for rural women

Biomass drying as rural enterprise

LEGEND

R&D AND PILOT STAGE



SCALING



REPLICATION



ADVOCACY / POLICY



TRAINING / EDUCATION /

CAPACITY BUILDING



OTHERS



What is the Impact of Our Work?

TIDEs STRATEGY FOR POSITIVE IMPACT

TECH INNOVATION

SCALE OF IMPACT



1000> 100-1000 <100

Regional National Non-Region Specific



Regional National Non-Region Specific

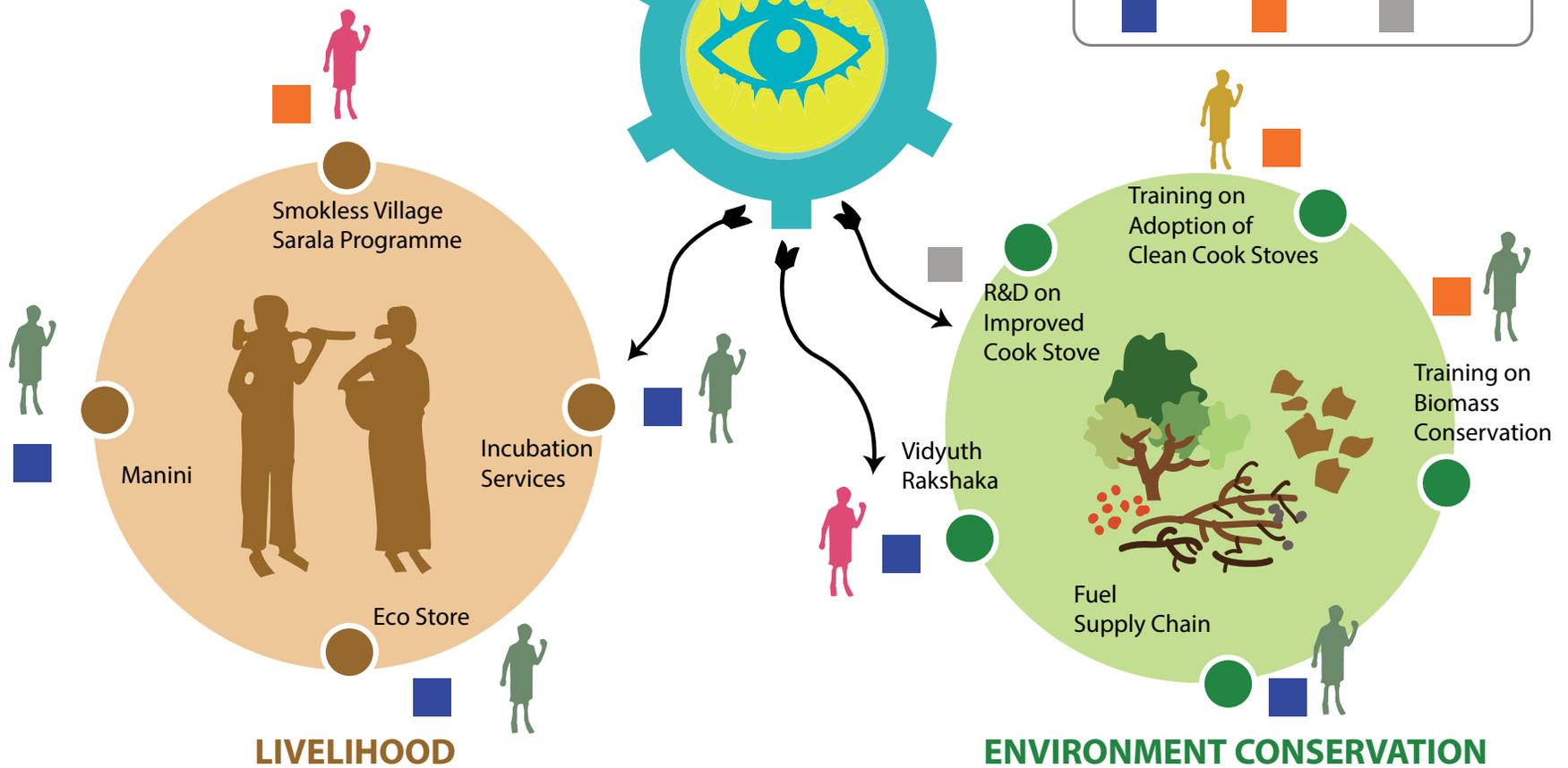


Figure 5: The impact of our work

OPINION: BUILDING BIOMASS SUPPLY CHAINS TO COMPLIMENT CLEAN COOK STOVE INITIATIVES IN INDIA

By Svati Bhogle, CEO - TIDE

For more than 25 years now, Government of India has led and supported cookstove initiatives in India. In spite of good intentions for several years from Government, social enterprises and philanthropy, about 80% of rural households continue to use biomass as the primary fuel for cooking and space heating (Census of India 2011).

TIDE has made contributions to the clean cooking space through different approaches. For household cookstoves, TIDE has enabled stove building (of Sarala stoves) as a women's income generation activity. To meet the clean cooking needs of the commercial and institutional kitchens, it has adopted the social enterprise model by spinning off a

company Sustaintech. Sustaintech sells a range of stoves (brand name PYRO), designed at TIDE. These stoves are compatible with the cooking needs and offer attractive savings on fuel cost every day. About 40,000 Sarala stoves and 4000 PYRO stoves are in active use today thanks to TIDE's and Sustaintech's efforts.

However, TIDE must move ahead with the times, without giving up on its earlier thought process. Taking a holistic view, and considering the past enablers and barriers, TIDE believes that it must now work not only to disseminate the clean cook stoves but also build competency in complimentary sectors. The new generation of clean cookstoves developed by scientists at FEAST

organization (Agni Sakhi and Agni Mithra) provides us with such opportunities. These include developing fuel supply chains from farmer to end user thus increasing farm incomes and women's participation in biomass trade and stove sales. It is expected that these enabling mechanisms would boost acceptance of the new generation stoves and offer convenience, comfort and safety for rural women.

On the fuel supply chains, TIDE believes that it must work on stimulating collection of agro residues. Recent data shows that India generates 400 million tons of agro residue annually out of which 145 million tonnes

is believed to be surplus, currently fetching limited or no income to farmers. There is great variety in the agro residues generated; they are also widely dispersed and have low density. There are several unknowns and challenges that must be addressed for these agro residues to flow into fuel supply chains and contribute to farm incomes. TIDE is piloting a few initiatives in the mulberry sector to gain a deeper understanding of these aspects.

The challenge of high collection cost must be met with an intervention in harvesting equipment. The issues that have been presently identified that have been need greater understanding are (i) the capacity of the equipment, (ii) the capital and recurring cost in its use compared to manual harvesting with small hand tools by farmers and (iii) the speed, comfort and convenience that it can offer. The challenge of low transportation cost from the farm to the aggregator also requires a correct selection of farm level compactors.

It is important that the agro residue is converted into a form that is the starting point for its further processing. Presently TIDE is exploring equipment for cutting, shredding and sieving the biomass for different end uses, at a processing capacity that is compatible with agro residue inflows and matching the power availability in rural India. Current end uses identified are use in combined heat and power (CHP) units as a starting material for briquettes, pellets and for manufacture of particle board.

There is much more that needs to be done. India has announced that it would blend petrol with 10% bio-ethanol. Aggregated agro residues are the feedstock for bio-ethanol. These small learning initiatives taken by TIDE, when publicly shared would lead to greater incomes for farmers, more rural jobs for biomass handling and size reduction, contribute to India's fuel security and help in achieving its climate commitments.

This intervention would also offer low cost prepared fuel for the new range of stoves that TIDE expects to disseminate thereby reducing exposure to harmful pollutants and consequently the health burden on women. This has been and will continue to be our vision in clean cooking sector.



Figure 6: Local biomass



Figure 7: 2 pan Agni Sakhi stove

HIGHLIGHTS OF PROJECT INTERVENTIONS

Vidyut Rakshaka

In the current discourse on urban spaces and smart cities, the need for sustainable energy consumption gains centre stage. It is more so with residential sector which constitute a big chunk of consumer base in cities. However the residential sector also throws many challenges right from lack of empirical evidence to poorly understood user behaviour on electricity consumption. VidyutRakshaka (VR) was conceptualized by TIDE in partnership with World Resource Institute (WRI) to address by 'the aforesaid' gaps.

VR is a citizen-led energy saving and demand side management program. It is cultivating a culture of saving among households by combining energy efficiency and energy conservation. The program educates participants about their own consumption historically, across categories, and in comparison to their neighbourhoods. This is then followed by customized recommendations along with goal for saving. The recommendations range from simple usage practices to efficient appliances to renewable energy possibilities.

In the year 2016-17, Vidyut Rakshaka grew from a pilot program of about 400 odd participants from 2 localities to about 1500 participants across Bangalore. The pilot program had shown savings of about 16% by about half the participants. Vidyut Rakshaka is also catching interesting trends like potential for saving in water heating and growing consumption trends in 1 and 2 BHK houses compared to 3 and 4 BHK houses. The savings and the citizen engagement encouraged the scaling up the program to cover the entire city and we are now covering 33 pin-code areas in the city. This spread will refine our understanding of Bengaluru's electricity consumption in different types of households

Some of the Unique Features of VR

- ➔ VR enjoys the Bangalore Electricity Company (BESCOM) support and it is providing a platform for utility engagement with consumers and also for policy inputs.
- ➔ VR trains and provides part time employment to aspiring youth who are called as Stewards in the program. The transformation of the stewards due to this engagement is an interesting case study by itself.
- ➔ VR heavily uses digital technology in data collection, analysis and report generation for participation. We are launching a mobile app shortly for participants.

HIGHLIGHTS OF PROJECT INTERVENTIONS

represented by the number of bedroom (BHKs), community (neighbourhood) behaviour trends and inequality in energy consumption within the city.

Going ahead, we plan to scale VR across cities in Karnataka and also pan India.

Program Patrons:

World Resource Institute
(WRI) India

Societe Generale Global
Solution Centre

Delhi's Hindustan Times covers VR
goo.gl/5WycHM



Figure 8: Data collection by stewards in VidyutRakshaka

HIGHLIGHTS OF PROJECT INTERVENTIONS

Next Generation Cook Stoves

Agni Stoves, a recent innovation of Energy Advanced Sustainable Technologies Foundation (FEAST) is a Sized Multi-fuel Horizontal Continuous Combustion Device (SM-HCCD) that addresses both health hazards and energy conservation aspects of biomass based cooking. It is a forced draft two pan stove using low cost, locally collected and minimally processed loose agro residues (around 50 mm length) as fuel for cooking.

The technology, Horizontal Clean & Continuous Combustion Devices - HC3D is IP protected (Indian Patent pending). The products - "Agni-Sakhi" and "Agni-Mitra" - too are IP protected and the rights rest with FEAST. TIDE legal rights are claimed by and its partner organization Sustaintech, through a technology



Figure 9: Field testing of AGNI stove

transfer agreement with FEAST are working for enabling market entry of Agni Mithra (for commercial cooking) and Agni Sakhi (for household cooking). Vendor development for stove manufacture has been completed while production in large batches is yet to commence.

HIGHLIGHTS OF PROJECT INTERVENTIONS

Advantages

- ➔ The innovative technology ensures clean and complete combustion (no release of toxic smoke) of biomass fuel and very good heat transfer 70% reduction in fuel consumption.
- ➔ The stoves are relatively light weight, safe and easy to use and maintain.
- ➔ Use of good quality insulation prevents heat loss from the stove body.

In keeping with TIDE's vision in cookstoves, we are promoting the stoves in areas where biomass is abundant by creating supply chain for the biomass fuel in local communities.

Program Patrons:

Core Grant by SEED
division, Department of Science
& Technology, Government of
India

Shell

Novozymes

Enabling Biomass Conservation and Stimulating Fuel Supply Chain in Rural India

TIDE has initiated a pilot activity in the mulberry growing regions in the outskirts of rural Bangalore to stimulate village level fuel supply chain. The objective is to channelize surplus agro-residue left over after mulberry harvest (which is otherwise wasted/burned) to a fuel supply chain. The expected benefits are many:

Benefits of local level fuel supply chain

- ➔ Additional income to farmers
- ➔ Livelihood opportunity at rural level for SHG groups (fuel supply chain)
- ➔ Boost local economy by monetizing local agro residue
- ➔ Reduce emissions by preventing burning of wasted agro fuel

This activity also aligns well with TIDE's vision to disseminate clean cook stoves utilizing local resources sustainably.

Mulberry is a crop that produces very high agro residue without too much seasonality. It is grown in Karnataka and was thus chosen for the pilot. A survey was carried out in Siddlaghatta near Bangalore to understand the agro-waste generation, farmers' needs, SHGs interest, cooking energy requirement among other things. We are also studying the properties of different agro residues as these will define the end uses. (like calorific value, ash content, ultimate and proximate analysis), moisture content etc. as they will define the end uses.

Based on the survey findings in Siddlaghatta, TIDE has formulated a strategy addressing the following:

- ➔ To make agro residue collection cost effective at farmer's level by deploying farm processing equipment
- ➔ To train SHGs also on processing of mulberry sticks and link them with potential local buyers (stove users who need fuel) so that income generation is facilitated
- ➔ To promote fuel aggregators who would convert the mulberry sticks into finished product of desired specs as required by the final consumer.
- ➔ Provide linkages to final consumer viz. fuel-pellet making plant, ply wood industry, cattle feed nutrients etc.
- ➔ To support for deployment of clean cook stoves at the village homes and institutions which will use the mulberry fuel supplied by SHGs

We have initiated activities to meet these objectives. We find that there are several unknowns in this supply chain right from mechanization at farmers' end to the logistics of the chain to the capacity of the SHGs. The pilot should address some of these issues and help in defining a long term strategy in this area of creating village level fuel supply chain using unutilized agro residues.



Figure 10: Discussion with stake holders on fuel processing

Program Patrons:

Core Grant by SEED division, Department of Science & Technology, Government of India

Shell

Novozymes

Technology Support for Dissemination of Biomass Drying Technology pan India through All India Co-ordinate Research Project (AICRP)

India ranks first in the world in production of fruits and second in production of vegetables. Though it contributes for 10-15 per cent of the global production, a meagre 2.2 per cent of the produce is processed. Based on a study by Indian Council for Agriculture Research in 2013, the reasons for food wastage in India was due to lack of storage infrastructure and processing units at the production sites. They estimated the loss at national level to be ₹ 92,651 crore.

The All India Co-ordinate Research Project aims at empowering rural women in processing horticulture/marine/forest produce/medicinal plants to add value to the produce at the source. This project aims to address at mitigating multiple issues such as food wastage, livelihood generation and women empowerment.

With its experience of over a decade in this technology and its dissemination, TIDE's role in this project is to provide support to five organizations across the country in setting up the drying unit along with guidance on linkages and other issues to run it as an enterprise.

	Partner organization	Area
Partners and their area of implementation in AICRP Project	INHERE	Block Chaukhutiya, AlmoraDist, Uttarakhand
	CIKS	Block Reddiarchanthram, AttuTaluk,Dindigal Dist,T.N
	Sambandh	Block and Taluk Athagarh, CuttackDist, Odisha.
	VIB.Nimpith	Sagar Island, South 24 ParaganaDist, West Bengal
	S.R. Engineering College	Anathasagar, Hasanparthy Taluk, Warangal. A. P.

With an aim to provide a holistic plan for partners, TIDE has designed a two module approach:

1. Technical training
2. Product and market development support

As part of the technical training module, TIDE trains partners in dryer construction, its operation and developing drying protocols. Post construction, TIDE assists their partners in developing a product after studying the local availability of raw materials and its market demand. TIDE has expertise in providing techno economics study, shelf life tests, and microbial load analysis.

On completion of product development, the partners are then provided with necessary marketing linkages. With the partners involving local communities in the drying, this process then closes the loop on providing livelihood opportunities through technology interventions.

Mentioned below are the products developed by partners supported by TIDE;

Table 2: Partners, their area of implementation and product details in AICRP Project.

Partner	Area	Product
INHERE	Almora, Uttarakhand	Amla and other products
CIKS	Dindigal, Tamil Nadu	Vegetables, Minor Forest Produce and Medicinal plants
Sambandh	Cuttack, Odisha	Medicinal Plants and Roots
VIB.Nimpith	South 24 Paragana, West Bengal	Fish and Prawn
S.R. Engineering Collage	Warangal, Andhra Pradesh	Vegetables





Figure 11: Dryer construction in progress at Uttarakhand



Figure 12: Biomass dryer construction for partner at Warangal



Figure 13: Women inspecting the newly constructed biomass dryer

Rural Hybrid Energy Enterprises Systems (RHEES)

This project is being carried out in collaboration with Research Councils, UK, Department of Science & Technology and a consortium of 7 partners led by Indian Institute of Science (IISc), Bangalore.

This project was conceptualised to address energy scarcity and unemployment issues in remote and backward villages in Karnataka and Assam. With technical assistance from IISc, the project aims at developing biomass based enterprise models to secure livelihoods, post energy access. TIDE's role has been to identify and implement livelihood options for the villagers based on the energy generation plan by IISc.

Based on the socio-economic survey analysis and considering other factors, TIDE has already introduced some livelihood packages including Paper bag making, Incense stick making, Vermicompost Enterprise, Mushroom cultivation and Value added ragi products. Awareness material, training programs have been developed on these.

At Indiganatha village, the process of setting up an enterprise was piloted with a paper bag making unit. Necessary backward and forward linkages were provided to make it sustainable. The exercise introduced the community to the process of initiating enterprise and TIDE to the community engagement processes in setting up enterprises.

TIDE would assess the energy situation and implement the appropriate energy packages after final choice of villages are done.





Figure 13: Paper bag making

WTP as Incubation centre for rural enterprises



<https://www.google.co.in/maps/place/TIDE+Women's+Technology+Park/>
TIDE's Women Technology Park situated at Aralaguppe village, in Tiptur taluk, Tumkur district (about 130 km from Bangalore) started its operations in 2011 with the objective to showcase rurally relevant technologies as livelihood options. By 2013, our vision and mission for WTP had shaped up:

Vision

Self reliant women contributing to well being of the family and for nation building

Mission

To offer facilities and resources that would deliver the entire range of services to rural women for micro enterprise development to enable them to manage successful micro enterprises and secure livelihoods.

TIDE has consciously and gradually designed the infrastructure and programs at WTP to fulfil the mission. Today WTP has a fully functional solar cum biomass drying unit, areca leaf sheath plate making unit, ragi processing unit, Low capacity brick kiln, green house, shade nets, training rooms, and an upcoming dormitory. There is a registered SHG based food enterprise running from there. The facility has farm pond, solar pump, solar water heater, solar lighting, rain water harvesting and an upcoming solar roof top. While remaining a rural outreach centre, WTP also functions as awareness cum dissemination centre for sustainable and rurally relevant technologies. During the year, WTP entertained more than 50 visitors representing various Government organizations including NABARD, GKVK, Ilsc, a few Corporate groups, SHG women groups, NGOs including CARE INDIA team, DILASHA, MYARADA, FES, ABHYADHMA SHIMOGA Network and a few FPOs. There were also regular visits by local community members and school children to observe the technologies.



Figure 14: Areca enterprise incubated by TIDE

In the year 2016-2017, TIDE developed a 3 year plan to incubate enterprises from in For year 1, we chose areca leaf plate making considering local availability and the facilities at WTP for training. As part of this, we have developed a methodology right from identification of potential entrepreneurs, to technical training, to securing finance to installation to securing markets. TIDE has been quite successful and on target to incubate ten enterprises in the villages surrounding WTP. The high market demand for areca leaf sheath plates due to plastic ban is a boon for this technology. TIDE will be working on 'value addition of millet' for year 2 using similar methodology. For incubation services, WTP serves as a hub to conduct awareness, exposure visit, trainings and trial productions. We also allow entrepreneurs to use the facility on short term basis till they are able to set up their own unit.

Program Patrons:

Core grant by Department
of Science & Technology,
Government of India
Societe Generale
Global Solutions Centre
FANUC
MANIPAL Foundation



Figure 15: Women involved in nursery sapling activities in WTP



Figure 16: Hands on training to women entrepreneurs incubated by TIDE

Smokeless Villages and Women Empowerment through Sarala Stoves

During the year 2016-2017, TIDE directly enabled construction of about 1000 stoves in various villages in Karnataka and converted about 30 villages to SMOKELESS VILLAGES in Kakanakote area in Hunsur district, Kondli Gram Panchayat in Tumkur district, and Satyamangalam region in Tamilnadu. In this process, 71 rural women were trained in stove construction. Women stove builders trained previously and in this batch collectively earned an income close to two lacs through various stove construction programs.

TIDE's sarala stove construction program has also been adopted by UNDP Small grant partners after training by TIDE. These partners have facilitated adoption of thousands of Sarala stoves in areas where they work in, across the country.



Figure 15: Women involved in nursery sapling activities in WTP

Program Patrons:

FANUC

Novozymes

Donations through Give India

MGIRED

WWF

TIDE's WTP is now accredited with SKILL COUNCIL FOR GREEN JOBS for training in construction of sarala stoves.

Capacity Building in the Area of Biomass Conservation and Improved Cook Stoves

Partnership with CARE India

TIDE's name was proposed as a technical partner in CARE India's program proposal to European Union on "Evolving a Women-centred Model of Extension of Improved Cook Stoves for Sustained Adoption at Scale". The proposal was approved and the program began in January 2016 with a goal to impact 10,000 women from FDHs and their 200 SHGs through clean cook stoves. It is a four year program and covers two districts in Odisha and one district in Chhattisgarh.

The objective is to promote sustainable adoption of Improved Cook Stoves (ICS) as a clean cooking energy solution among forest-dependent households (FDH), through a combination of capacity building, collectivisation, market development, and multi-stakeholder engagement actions, resulting in 10,000 women from FDHs using ICS and developing a sustainable ICS adoption model for replication among 800 million rural households in the country who use traditional and polluting cook stoves.

TIDE's role in this program is primarily as an Improved Cook stove (ICS). *Technology facilitator. The engagement started with designing and analysing results of a situational analysis study on cook stoves in the project villages. Based on the outcome of this and other studies at CARE India, TIDE developed awareness materials on Improved cook stoves. Further in collaboration with CARE India, TIDE developed comprehensive curriculum for SHE schools (Sustainable House Hold Energy Schools) - a novel concept introduced by CARE India. As part of this, a Train the Trainers program was done by TIDE to CARE India on the SHE curriculum with focus on sharing our field experience in promoting Improved Cook stoves.*

The SHE curriculum is being delivered at sites and TIDE is working closely with CARE India on refining it . TIDE is also involved in helping village communities to choose ICS models appropriate for them. In future, TIDE will be working on methodologies for involving SHGs in the ICS adoption.



Figure 17: Training CARE India team on stove performance related testing



Figure 18: Women observing cooking in an ICS at a cooking camp

Partnership with WWF India

WWF partnered with TIDE to provide technical support for its partners under the People and Protected Areas Programme. The objectives were to provide information on clean energy options, train on undertaking user needs assessments, and in matching technology to a need and finally to develop the capacity of partners to adapt a technology to suit local needs, in the context of clean energy.

To achieve these objectives, regional workshops were conducted in 4 locations across the country for WWF staff and their NGO partners:

South - Bangalore, Karnataka.

West - Ranthambore, Rajasthan.

East - Kaziranga, Assam.

North - Pilibit, Uttarpradesh.



Figure 20: Observing cooking at a local house



Figure 19: Capacity building on biomass conservation for WWF at Kaziranga, Assam

The regional workshops provided an interesting opportunity for exploring and learning about biomass conservation issues with community involvement around sanctuaries and wildlife corridors. The engagement with WWF teams, partners and community representatives presented different challenges leading to problem identification and probable solutions.

During these workshops, there were live demonstration of products and discussions around the same. TIDE introduced the partners to the tool we use to do need assessment. Specific challenges were identified for that area and solutions were derived in concurrence at together. Each workshop also had a general session on biomass conservation based on a curriculum developed at TIDE.

CASE STUDIES

ECO STORE

A novel concept of "ECO STORE BY RURAL WOMEN" has been successfully piloted by TIDE. The store is managed by 5 rural women entrepreneurs at KB cross junction Tiptur taluk of Tumkur District after extensive training and hand holding. It is a place for entrepreneurs to market their eco friendly products and it is managed by this group of women.

Some of the products displayed in Eco store are:

- ➔ Solar products - Solar mini light, solar lantern, solar home lighting, solar study lamps and mobile charger.
- ➔ Areca sheath plates - different dimensions (4.5 inch bowl to 16 inch plates)
- ➔ Value added ragi products Ragi products - ragi pappad, ragi malt and ragi nippattu
- ➔ Food items like Organic Amla Candy, Pickles, rice pappad

ECO STORE is the logical next step in TIDE's approach to provide livelihood skills. After training and production, many rural entrepreneurs struggle to find markets and even if they find, they end up paying a big margin just for marketing. As a solution to this problem, TIDE has experimented with the Eco store model for rurally relevant products. This model also brings together products made by various entrepreneurs. To align with TIDE's philosophy, we encourage only eco friendly products to be marketed in the store.

TIDE has provided knowledge and trained the women managing the shop to undertake first level maintenance and repairs for some of the products like solar products.

TIDE will be looking at replicating this at other places after understanding the economics in the model.

Program Patrons:
Manipal Foundation



Figure 21: Women at ECO STORE introducing their products



Figure 22: Promotion of ECO STORE

MANINI - Challenges and Way Ahead

TIDE, with support from multiple national, international and government organizations, has been instrumental in promoting drying enterprises among rural women. Based on research of over 5 years, a training module was designed to assist in dryer construction, product development and marketing. With support from NABARD, TIDE took the onus of demonstrating the multiple benefits that technology could provide.

TIDE organized a group of 12 women and assisted them in setting up a self help group, named MANINI. MANINI is a self help group of rural women, from the lower income group, of Aralaguppe village. MANINI was registered in July 2014, and since then the group has been focusing on post harvest food processing units. MANINI, in particular, focuses on drying locally grown vegetables. A biomass dryer and solar dryer was setup at Women's Technology Park. The women from MANINI were then provided with technical training and drying protocols. MANINI entered the urban market with 2 products - Onion and Garlic. Based on further research and acceptance from the urban market, four more products were introduced - Tomato, Carrot, Mint and Chilli. The latest addition to the product list has been Moringa leaves and powder. MANINI has crossed a turnover of 1.5 lakhs in March 2017.



Figure 23: MANINI products

MANINI'S ACHIEVEMENT

- ➔ Provided economic empowerment to rural women
- ➔ Provided non farming alternate livelihood option
- ➔ Provided value addition to local produce
- ➔ Boosted local economy

Program Patrons:

FANUC
Societe General Global
Solutions Centre
Manipal Foundation



Figure 24: Woman in production

TIDE has been providing handholding support to MANINI in various aspects from raw material procurement to production to marketing. Being urban convenience products, there is a requirement for concept marketing for MANINI Products. While production protocols are in place, the supply chain management from procurement needs improvement considering the flexible work options desired by rural women. Optimal utilization of production capacity is also a challenge.

TIDE is currently working on these challenges and addressing them so that the MANINI model can be replicated in other rural areas.

TIDE NEWS AND EVENTS

TIDE on Better India:

<https://www.youtube.com/watch?v=SMHyjLtN19E&feature=youtu.be>

PUBLISHED ON JANUARY 5th 2017 TIDE's WTP is now accredited with Skill Council for Green job and National Skill Development Council (NSDC) for Sarala stove training construction program.

Vidyut Rakshaka covered by Delhi's Hindustant times: goo.gl/5WychHM

Ms. K. Sumathy presented Vidyut Rakshaka at CONNECTKaro 2016 and 2017, annual conference organized by WRI.

Vidyut Rakshaka invited to present our work at the Unlock Bangalore event conducted by WRI as part of a panel discussion on "Data driven city planning - the role of building coalitions."

TIDE was invited to put up a stall at World environment day Exhibition, Kanteerava stadium on 5th June 2016.

Mr. Velusamy from TIDE attended Give India Partners' meet at Mumbai on 27th and 28th May 2016.

Ms. Svati Bhogle addressed the working group on Biofuels on the topic 'Biomass Aggregation Supply chain & Bio energy program - A grassroot approach' on 12th July 2016 at Delhi.

TIDE was represented by Mr. Ashiq and Ms. Pramila at the India Clean Cooking Forum at New Delhi organized by CLEAN.



Figure 25: Article of BLR Mirror 5th May 2016

TIDE OPERATIONAL TEAM

AS OF JUNE 2016

No	Name	With TIDE since	Roles
1	Ashiq Ahamed C	Dec-16	Leads Cook stoves team
2	Ayushya Khanna	Feb-16	Leads Energy services team
3	Babu Bikash	Apr-17	Executive, Cook stoves team
4	Balaji Rao G	May-15	Leads Data cell at TIDE
5	Chandranna K	Feb-98	Man Friday at TIDE
6	Elizabeth	May-17	Front office administrator
7	Jayaraman S	Mar-94	Heads Accounts
8	Kavitha T K	Jan-16	Field executive, Women's Technology Park
9	Leela M	Jun-13	Accounts Executive
10	Manjunath H C	May-01	Field In charge, Women's Technology Park
11	Pramila S Poojari	Jan-11	Leads Women & Livelihoods team
12	Sathvik Gadvi	Apr-17	Heads MANINI TIDE incubated enterprises
13	Sreedhar	Oct-16	Field executive, Women's Technology Park
14	Sumathy K	Jan-11	In charge of operations, fund raising and program delivery
15	Svati Bhogle	Apr-99	Technical advisor, project conceptualizer, mentor

TIDE MANAGEMENT TEAM

No	Name	Role in TIDE Management Team CoM - Council of Management; GB - General Body	Role in other organizations / Area of expertise
1	Dinesh Kagathi	GB Member	Renewable Energy Professional
2	Hari Natarajan	CoM & GB Member	Independent Energy Consultant
3	Hoysala N Chanakya	GB Member	Scientist, C.S.T, I.I.Sc, Bangalore
4	Jayachandra A N	CoM & GB Member	Senior Administrative Officer, JNCASR
5	Krishna N V	Chairman - CoM & GB member	Director, Sustaintech Pvt Ltd
6	Rajagopalan S	GB Member	Professor, IIT Bangalore
7	Ravichandran K	GB Member	Sustainability expert & consultant
8	Sampath Kumar N	GB Member	Director, TIDE Technocrats Pvt. Ltd., Bangalore
9	Shailaja R	CoM & GB Member	Regional Director, CEE-South
10	Sharachchandra Lele	GB Member	Senior Fellow & Convenor, Centre for Environment & Development, Ashoka Trust for Research in Ecology and the Environment (ATREE)
11	Sreenkanta swamy	GB Member	Fellow and Executive Secretary at KSCST
12	Sujatha Byravan	GB Member	Principal Research Scientist, CSTEP
13	Sumathy K	GB Member	Executive Director, TIDE
14	Svati Bhogle	Secretary - CoM & GB member	MD , Sustaintech Pvt Ltd
15	Vinod Vyasulu	GB Member	Faculty, Jindal School and Government and public policies
16	Vishwanath S	GB Member	Director, Biome Solutions; Patron - Rainwaterclub.org

FINANCIAL SUMMARY

TECHNOLOGY INFORMATICS DESIGN ENDEAVOUR, No.19, 9 th Cross, 6 th Main, Malleshwaram, Bangalore – 560003 Complete report is available at www.tide-india.org			
RECEIPTS AND PAYMENTS ACCOUNT			
Particulars	Schedule	For The Period Ended 31 st March 2016	
		In Rupees	In Rupees
Receipts			
Opening Balance			
Cash on Hand	9	33,544	
Cash at Bank	9	2,936,140	2,969,684
Project Receipts			
Grant - Specific Projects/ Programmes	11	18,366,289	
Other Activities/ Reimbursements/	11	92,274	
Donations	11	275,450	18,734,013
Award			
Overhead Recovery/Receipt - Per Contra	11		462,913
Usage of Facilities Recovery/ Receipt - Per Contra	11		49,500
Interest Received			
Bank interest - TIDE		179,013	
Interest on I.T refund		855	179,868
Recoveries			
Travel/Project Advance Recovery			
Staff		591,715	
Entrepreneurs/others		1,204,537	1,796,252

Salary Deductions - Recovery			
Professional Tax		18,800	
Provident Fund (employee contribution)		393,968	
SWF Loan		82,250	495,018
Other Recoveries			
TDS Recovery (Consultants/Contractors)			307,798
Other Receipts/Refunds			
Interest Receivable on F.D (Receipt)			18,897
Fixed Deposit - Withdrawal			-
I.T - TDS (Refund from I.T Dept) (excluding interest on IT Refund)			111,415
Other Misc Income			
Income from Activity by TIDE (AIREC project)		225,000	
Income - Give Foundation - General Fund/iGive programme		34,891	
Income from Field Testing of Stove - SIPL		20,000	
Income on Demo & Capacity Building on stoves		39,620	
Incom/donations - Sarala Stove Programme		6,000	
Other Incomes		61,879	387,390
Entrepreneur Development Fund (Receipts)			77,373
Staff Welfare Fund (Receipts)			223,798
Total			25,813,919

Particulars	Schedule	For The Period Ended 31 st March 2016	
		In Rupees	In Rupees
PAYMENTS			
Project Expenditure			
Specific Projects/ Programmes	11	10,077,404	
Other Activities & Reimbursements	11	92,526	
Donation related expences	11	80,613	5,164,559
Secretariat Expenditure	11		212,819
Travel / Project Advance			
Staff		605,168	
Entrepreneurs/Others		1,132,037	1,737,205
Deposits			
Fixed Deposit			-
NON-FCRA		800,000	
FCRA		2,500,000	
SWF		200,000	3,500,000
Rrnt Deposit (ECO Friendly shop)			50,000
WRI - Phase1 balance (carried forward to extended phase1)			10,762
Salary Deductions - Remittance			
Professional Tax		18,800	
Provident Fund (Employee Contribution)		393,968	
SWF Loan		82,250	495,018

Other Remittance			
T D S (Consultants/ Contractors)			307,798
TDS - Grantors/Bank			313,872
Entrepreneur Development Fund			60,941
Staff Welfare Fund (Payments)			130,639
Other Payments/Debits			
Amount transferred to TIDE (Tea project bank account closure)			1,870
Interest Receivable on FD			36,208
Closing Balance			
Cash on Hand	9	39,301	
Cash at Bank	9	8,666,944	8,706,244
Total			25,813,919

Refer our Report of Even Date

For MSSV & Co

Chartered Accountants

FRN 001987S



For Technology Informatics Design Endeavour

N.V. Krishna
N.V. Krishna
Chairman

Svati Bhogle
Svati Bhogle
Secretary

K. Sumathy
K. Sumathy
Executive Director

Place: Bangalore

Date: 19.08.2017

Place: Bangalore

Date: 19.08.2017

TECHNOLOGY INFORMATICS DESIGN ENDEAVOUR, No.19, 9 th Cross, 6 th Main, Malleshwaram, Bangalore – 560003			
INCOME AND EXPENDITURE ACCOUNT			
Particulars	Schedule No.	For The Year Ended 31 st March 2017	
		In Rupees	In Rupees
Income			
(A) Project grants	11	18,336,754	4,590,102
Add: Interest earned on project grants		111,047	66,701
Unspent balance b/f from previous year		1,762,316	(17,367)
Less: Unspent Balance at the end of the year		10,043,376	253,104
		10,166,742	4,386,332
(B) Donations received	11	275,450	1,727,600
Add: Unspent balance b/f from previous year		24,113	598,266
Less: unspent balance at the end of the year		218,950	1,533,325
		80,613	792,541
(C) Other income			
Overhead recovery	11	462,913	289,806
Usage of Tide facilities	11	49,500	32,500
Interest received		179,868	50,222
Miscellaneous income		387,390	492,414
Total Income (A)		11,327,026	6,043,814

Expenditure			
(A) Project expenses during the year	11	10,171,800	4,367,285
(B) Donation related expenses	11	80,613	797,274
(C) Administration expenses			
Secretariat expenditure	12	213,999	1,114,239
Depreciation	5	68,537	77,687
Miscellaneous expenses		-	26,650
Total Expenditure (B)		10,534,949	6,356,485
Excess of Income over expenditure for the year carried to Balance sheet	C=(A-B)	792,077	(312,671)

Refer our Report of Even Date
For MSSV & Co
Chartered Accountants
FRN 001987S



For Technology Informatics Design Endeavour

N.V. Krishna Chairman
Svati Bhogle Secretary
K. Sumathy Executive Director

Place: Bangalore
Date: 19.08.2017

Place: Bangalore
Date: 19.08.2017

TECHNOLOGY INFORMATICS DESIGN ENDEAVOUR, No.19, 9 th Cross, 6 th Main, Malleshwaram, Bangalore – 560003			
BALANCE SHEET			
Particulars	Note No.	Asat 31 st March 2017	Asat 31 st March 2017
		In Rupees	In Rupees
Source of Funds			
Capital Fund	1	736,970	736,970
General Fund	2	4,338,155	3,546,078
Entrepreneur Development Fund [EDF]	3	904,237	867,804
Staff Welfare Fund [SWF]	4	657,692	593,033
Total		6,637,053	5,743,885
Application of Funds			
Fixed Assets	5	903,315	972,132
Current Assets			
Advances & Deposits	6	205,153	194,200
Receivables	11	496,151	997,461
Fixed Deposit with Bank	7	6,500,000	3,000,000
Other Current Assets	8	619,274	428,006
Cash & Bank Balances	9	8,706,244	2,969,684
Total (A)		16,526,822	7,589,351

Less: Current Liabilities			
Sundry Creditors	10	34,608	33,708
Unspent Balances	11	10,758,477	2,783,890
Total (B)		10,793,085	2,817,598
Net Current Assets C = (A-B)		5,733,738	4,771,752
Total		6,637,053	5,743,885

Refer our Report of Even Date

For MSSV & Co

Chartered Accountants

FRN 001987S



For Technology Informatics Design Endeavour

N.V. Krishna
N.V. Krishna
Chairman

Svati Bhogle
Svati Bhogle
Secretary

K. Sumathy
K. Sumathy
Executive Director

Place: Bangalore

Date: 19.08.2017

Place: Bangalore

Date: 19.08.2017

Technology Informatics Design Endeavour (TIDE)

19, 9th Cross, 6th Main, Malleswaram, Bengaluru - 560 003

Ph : 91-80-2331 5656 Fax : +91 80 23344555 E mail : info@tide-india.org

tide@vsnl.com

www.tide-india.org

HOW CAN YOU ENGAGE WITH US?

We welcome you to be part of our journey!

TIDE is happy to partner with individuals and institutions.

Some of the options to engage with us are:

- TIDE is happy to conceptualize programs aligning your goals with our vision and strengths, whether it is CSR or other grants
- Please follow our website www.tide-india.org for updates on employment opportunities
- Whether you are a high school student, graduate or an employee, we are happy to take you as intern, provided we can find a match within TIDE. Write to us at info@tide-india.org with your background and interest areas; we will respond if there is alignment with any of our requirements
- If you have a skill and you think TIDE will benefit from it, offer it to teach / share it with us right from communication to photography to digital tools.
- You can donate to TIDE general funds or for any particular program. Please go through our website menu: <http://tide-india.org/contribute/>