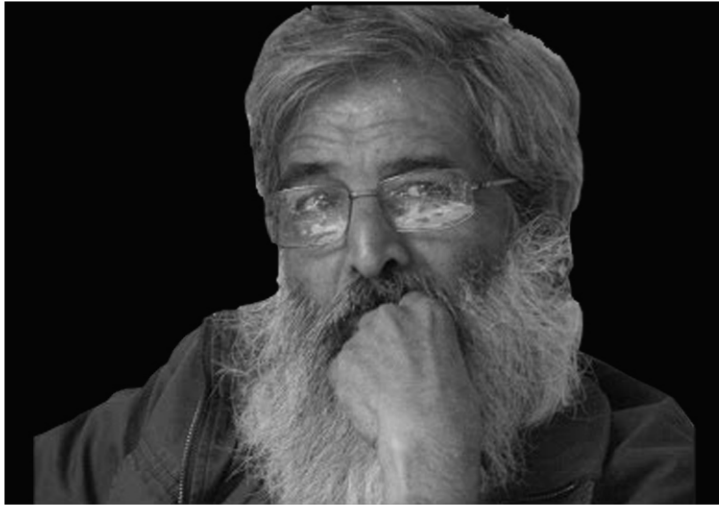




HUNNARSHAL FOUNDATION

ANNUAL REPORT 2017-18





Prof. Neelkanth Chhaya
Chairman, Hunnarshala Foundation

This year Hunnarshala continued its activities in all areas of its objectives. Artisan Empowerment, Community Empowerment, Education and Research were all practiced with the usual passionate energy displayed by those who work at Hunnarshala.

The Artisan Empowerment Unit became a facilitator and guide to the various Artisan Entrepreneur Companies and initiated, continued and completed a variety of projects across India. Through the activities of the unit, the value of artisanal craft is getting recognised, livelihoods are being created, and a sense of the dignity of labour is fostered. The artisans companies allow members ownership and pride in skill. Thus Hunnarshala is becoming an agent of change.

The Community Empowerment Unit continues its work in developing approaches that help communities to improve their living conditions while paying attention to environmental and societal issues. Its work in post-earthquake reconstruction in Nepal, and its numerous initiatives to help communities take decisions in institution-building and self-empowerment are notable.

Hunnarshala's contribution towards education is both unique as well as impactful. Karigarshala educates young people to develop skills of carpentry and masonry, and thus helps build a cadre of skilled and environmentally conscious and socially responsible workers. At the same time, Hunnarshala hosts a number of training programmes for students from architecture colleges, and also offers internships to students.

All of this complex and demanding work needs the support of an efficient administration, and we are happy to note that this exists in an exemplary way at Hunnarshala.

In a time of difficult conditions, Hunnarshala continues to do its utmost in the areas of its focus. Throughout the year, members of the various groups and the Board have been discussing ways to further tune up the organisation, and we are hopeful that the organisation will move to greater strength and effectiveness.

1. THE KARIGARSHALA UNIT : *Education initiative for students*

2. ARTISANS EMPOWERMENT : *Promoting Artisanship*

D.E.W.A.T.S.

Jhulelal Tirthdham, Narayan Sarovar

Retreat Home for Studio Made, Vijaywada

The Villa, Sedata

3. COMMUNITY EMPOERMENT: *Helping communities to redevelop their villages*

Slum Rehabilitation, Sanjaynagar, Ahmednagar, Maharashtra

Baa Memorial, Amikunj, Bhujodi

GIC School, Baram, Uttrakand

Training Workshop for Rammed Earth Artisans

Handholding Program with Lumanti

Alma Mater School, Jodhpur, Rajasthan

Socio-technical Support for Rehabilitation in Urban Settlement

Replanning of Settlement, Machegaon

Rehabilitation and Relocation of Monks Village, Pakhel, Nepal

Sayadri School, Pune

Streets as Public Space, Bhuj

Retrofitting in Thecho and Siddhipur

Shelter for Urban Homeless, Bhuj

4. RESEARCH and DEVELOPMENT

5. FINANCIALS

6. HUNNARSHALA TEAM



On 15 June 2017, Karigarshala entered its 7th year. This year students have come from Kutch, South Gujarat and Madhya Pradesh. A total of 25 students have been admitted for the 2017-18 batch. As per curriculum all the students learn the basics of electrical works, plumbing works, and masonry. After the initial orientation the students select what they want to learn further. 14 students decided to learn carpentry and 11 chose to learn masonry.

In masonry, brick-joining, high wall, right-angles, joints, etc. was taught. Foundation and drawings of foundations is taught. The students also learn the importance of masonry in a house. They are involved in brick masonry on the ground for a week. Until every student understands the concepts with clarity; the exercises are repeated. Thereafter details of foundation are taught. Like, the depth and width of the foundation should depend upon the soil type, etc. Foundation masonry is practiced about 4-5 times.



In carpentry, the students learn identification and use of different tools, cutting along the line using a ruler. The students made a small product called a 'Patla'. Joinery is very important in carpentry, so they learn making complex joints and then studying and interpreting the drawings. Thereafter, once the students feel confident enough; they start making stools. The students learn the selected trade for 9 months and in the last 3 months they are involved in live construction projects so that they gain the experience of working in a site environment and also learn about working efficiently to meet the project deadlines.

The carpentry students participated to make wooden false ceiling for a showroom of Titan in Delhi. The masonry students participated in the construction activity of shell dome structure at Sabarmati River front in collaboration with CEPT University.





Jhulelal Tirathdham Temple at Narayan Sarovar is an initiative of Shri Jhulelal Tirathdham Trust, Mumbai. The trust has selected a serene location at Narayan Sarovar to construct a temple of Jhulelal. Architect Nishant Lal based in New Delhi is designing the temple.

The first phase of the project started in 2017. The architect and the trust members approached Hunnarshala to participate in the project as Project Management Consultants and execute the work with the help of artisan entrepreneurs. As the brief was that the temple must have a life span of 100 years and also located in saline area, Hunnarshala suggested using natural materials for constructing the temple.

Local stones, marble, stones from Dhangadra and wood are being used to construct the temple. Steel and cement are being used wherever necessary.



JHULEL TIRTHDHAM

The lead contractor is Kesra bhai, who has participated in projects undertaken by Hunnarshala. His association with Hunnarshala is for more than 20 years. "Lustre", an artisan entrepreneur company has also been associated in this project for stone masonry works under the lead contractor.

The total turnover of Lustre till March 2018 was Rs.3,33,000.





Times Square Properties Pvt. Ltd, a Bhuj based real estate firm through its architect named Mr. Hartmut approached Hunnarshala for constructing stabilized rammed earth walls and wooden roof understructure for their project named "The Villa" in Sedata village near Bhuj.

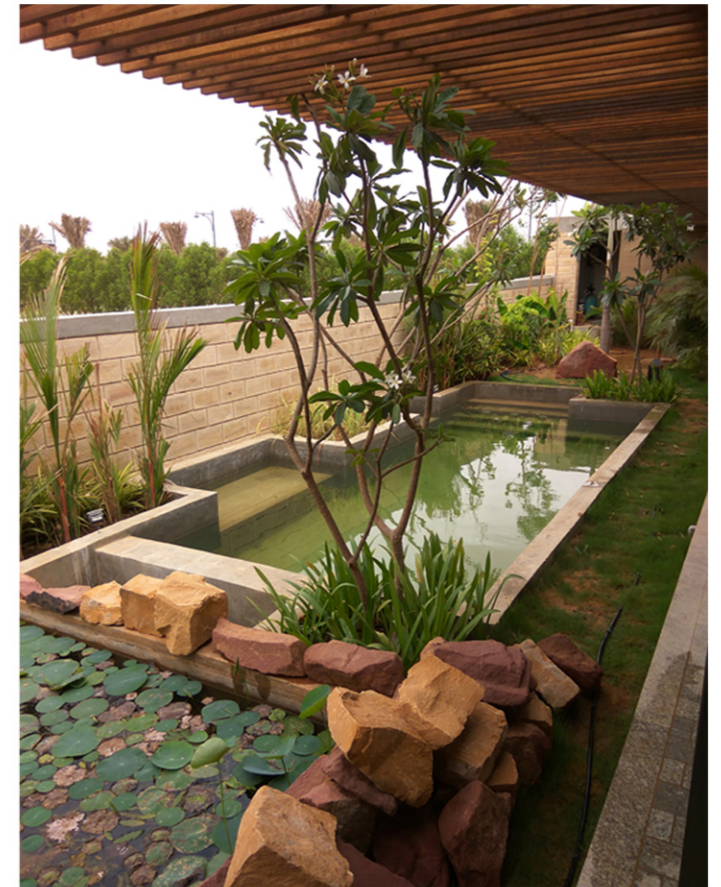
Around 100 villa's will be constructed using Stabilized Rammed Earth and wooden roof understructure. In the current financial year two villas having different floor area were constructed. These two houses are sample houses for marketing the properties.



THE VILLA

"Sau Haath" an artisan entrepreneur partnership firm constructed the stabilized rammed earth walls. "Ozari Joinery" an incubation company, for the graduated student of Kari-garshala, constructed the wooden roof understructure. In the next financial year the project work will commence.

The total turnover of Sau Haath in this project was Rs.4,82,000.
The total turnover of Ozari Joinery in this project was Rs.4,25,000.



RETREAT HOME FOR STUDIO MADE, VIJAYAWADA



Studio Made at Hyderabad is an architectural firm of Architect Madhusudhan Chalasani. He has designed a retreat home to be constructed at Vijaywada. He approached Hunnarshala for helping him with exposed masonry works. He has selected wire cut burned bricks as the masonry material for the entire house.

An artisan team led by Mansukh Chavda and Gopal Chavda under the technical guidance of Hunnarshala is working on the project. The total turnover of the artisan team in the till March 2018 was Rs.13, 50, 000



K.F.I. SCHOOL, PUNE

Shayadri Valley School (KFI), situated near Pune approached Hunnarshala for constructing an art and craft facility using natural materials. Stabilized Rammed Earth was selected to construct the walls of the art and craft facility. Around 3500 cubic feet of SRE walls were constructed by the Artisan entrepreneur company named Sau Haath, based on the design of the architect appointed by the school.

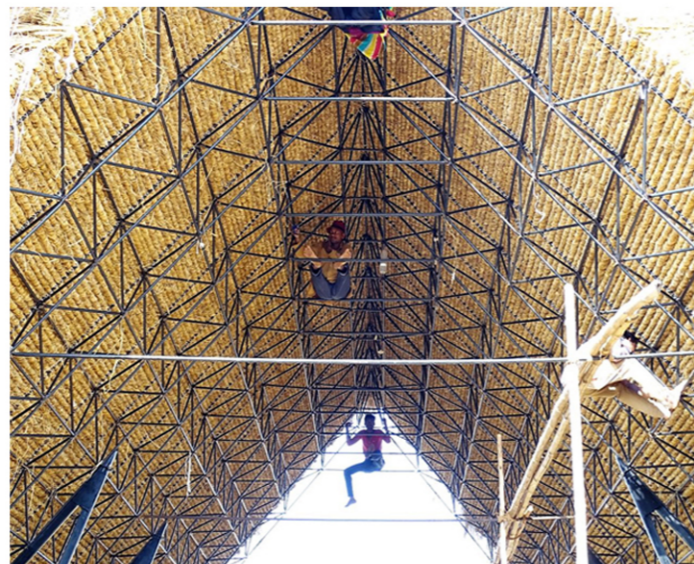
The total turnover of Sau Haath in this project was Rs.3,15,650 till March 2018.





Mr. Laxmikant Kapsikar of Raj Laxmi is an owner of a farm in Yavatmal, Maharashtra. His vision for the farm is to reinstate the traditional practices in the field of agriculture, Soil and Water Conservation, Eco tourism, Building / Traditional Crafts, Animal Husbandry and Education.

The immediate requirement was to construct a shelter for the cow and ox present in the farm. Space frame and thatch roof was suggested and it was acceptable to Mr. Kapsikar. Artisan team of Span – Space frame systems and Matha Chajj



MRUDUGANDH, Yavatamal

– The thatch roof company started the roof work, which comprises of space frame roof understructure under thatch roofing system. A total of 16 roofs are to be constructed of, which space frame is 29600 sq.ft. and thatch roof is 26850 sq.ft.

The total turnover of Space frame till March 2018 from this project is Rs.4,00,000 and that of Matha Chajj is Rs.2,21,000.





CEPT University representative, Ms Urvi Sheth approached Hunnarshala and shared the outcome of student workshop she had conducted during SWS 2016 course: Digital Crafts: Customised Bricks 1.1.

Based on further discussions, Hunnarshala's involvement was felt for developing implementable design and also construct the shell structure at the Sabarmati River Front. The form was developed as part of the student workshop. For implementation, Hunnarshala did following design development processes:

- Designing the Structural system
- Proposing construction materials
- Construction detailing.
- Defining the Construction methodology.



TILE DOME, Sampling

Based on the design, a scale-to-scale prototype was constructed in Bhuj. Terracotta tiles were used to construct the dome. This prototype underwent a load test based on the structural parameters. On successful completion of the load test a consensus decision was made to replicate the same on site i.e. the Sabarmati riverfront at Ahmedabad. Both the prototype and the dome at site was constructed by ex-students of Karigarshala under expert technical supervision.



D.E.W.A.T.S, Madhya Pradesh



Ujjain STP 2



Rewa STP 3



Madhya Pradesh Police Housing Corporation intended to treat wastewater generated in the establishments of the corporation located in Bhopal, Rewa and Ujjain. Hunnarshala suggested the corporation to install Decentralized Waste Water Treatment system (DEWATS) which consume less energy and can be designed using the contour of site to make it function efficiently. Hunnarshala was contracted to design DEWAT systems at the following establishments. The landscape was designed simultaneously with the DEWAT system.

- Police Academy and Police Training School, Bhauri, Bhopal, Madhya Pradesh for sub soil surface irrigation. The DEWAT system was designed to treat 2,20,000 liter wastewater.
- Reserve Battalion For State Industrial Security Force at Batlo, Rewa, Madhya Pradesh for sub soil surface irrigation. The DEWAT system was designed to treat 70, 000 liter wastewater.
- Police Training School, Ujjain, Maksi Road, Madhya Pradesh for sub soil surface irrigation. The DEWAT system shall be designed to treat 2,40,000 liter wastewater.

The construction of the DEWAT system at Rewa has been complete and is waiting commissioning. The systems at Bhopal and Ujjain are under construction.

THATCH ROOF, KOLKATA

Mr. Linus Kendell approached Hunnarshala for helping him construct a thatch roofing structure in Bauripur near Kolkata. A team of 11 artisans from Matha Chhaj along with a thatch expert went to Kolkata and installed thatch roof on a bamboo roof understructure measuring 1800 sq.ft.

Matha Chhaj's turnover from this project was Rs.1,85,000.





An alternative education school that will cater to the students from Kindergarten level to secondary level is being executed in Jodhpur, Rajasthan. The school is under construction with the involvement of local artisans from last 1 year. The idea of using local materials like Sandstone, Lime, soil from site and re-cycled wood is very significant. The traditional techniques of lime in mortar and plaster and stone masonry are being incorporated in construction while promoting the local artisans and their skills parallel in the process. The Alternate techniques like Stabilized Adobe, sand-packed foundation, Shallow domes and Vaults without steel are done effectively while exchanging knowledge from artisan's and their understandings.

Here, we have also involved school kids in the process so we have elements like pottery where we did workshops with the potters from nearby villages and these are being used in masonry as elements of interaction while parallel to this engaging the artisans and using their pottery in roofing technology like Filler slab.



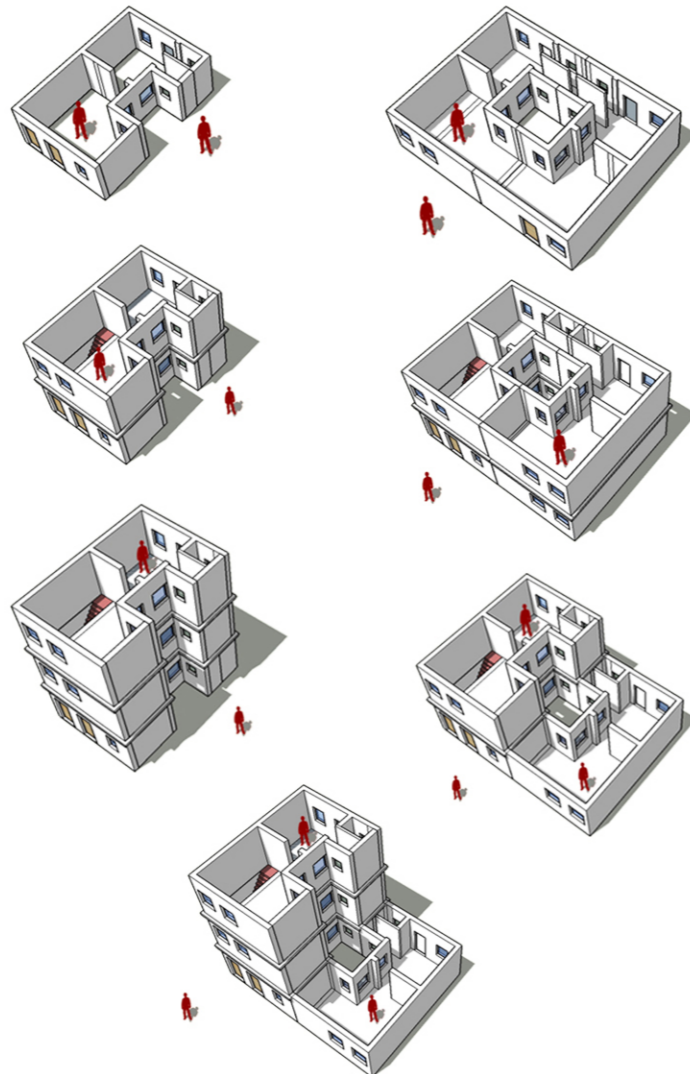
Also, recycled wood is being used in mezzanine floors, sandwich roofs technology and also structurally as columns, brackets, beams and other wooden members. We also had this opportunity to explore and use scrap metal and we made jaali out of scrap and used in campus. Also, we are using the traditional flooring methods – Lipan and mud floor and flooring out of waste mosaic.





Curry Stone Design Collaborative (CSDC) invited Hunnarshala to collaborate with them and Snehalaya, a local organization at Ahmednagar, Maharashtra to work on a dense pocket of slum called Sanjaynagar. Sanjaynagar began as a small settlement for leprosy patients about five decades ago, with only about 20 families and was called Morshidabad then. Soon after, a slum with about 50 families, was evicted from Wadaipark area of the city and put at this location. It kept growing after that and today there are more than 250 families from atleast 12 different communities living on about 2 acres of land.

Detailed surveys of the land as well as the communities have already been conducted. Several meetings with the communities have also been done, with a group of representatives visiting Bhuj to interact with the studio as well as with the homeowners of Ramdevnagar to have a better understanding of the processes that they might have to go through. A basic concept design and financial calculations were presented to the community, as well as discussed with the local political representatives and government officials. The concept has been now further developed and design development is currently being done.



NISETI, Vadodara, Gujarat

NISETI is an Art facilitation center, which will provide space for different artist to produce and exhibit their work. It will also be an office for N.G.O named Pag dand, which facilitate city people to plant trees. The building would be a demonstration for city construction, as the material used would be debris waste and various sustainable technologies. The project is in design phase and the construction is expected to start at the end of this year.





GIC School at Baram is a Secondary/ Higher Secondary school facility for nearby 8-10 villages providing education to students from grade six to twelfth. It is a government school, which was started in early 60s and development took place, as and when funds were available from the government. At present day, the Baram Inter College has been declared as one of the hundred model schools by the government of Uttarakhand. It caters to the students from around twenty kilometers.

Tata Relief Committee (TRC), Dehradun, which is working in state for flood rehabilitation, invited Hunnarshala to build affected government schools. Importance had been given to local materials and reducing carbon footprint. Understructure for roofs had been made from locally procured bamboos. After the discussion with locals, requirement was felt for a roofing system, which uses no steel reinforcement and less cement. So Hunnarshala introduced shallow domes, first with bricks and then with stones. Traditional artisans were invited and local masons were also trained. All demolished debris is reused in foundation and landscaping for new construction.





A catastrophic earthquake and series of aftershocks rattled people all over Nepal, physically and mentally. 1 nun and 64 local people died within the nunnery and monastery. Many more nuns and monks were physically injured, some hit by falling rocks and some buried under their houses. All the houses were levelled and unliveable. In addition, the nuns and monks were mentally deeply troubled by the interruption of their spiritual practice, and by the danger of on going falling rocks and active landslides in the area. 130 nuns and 26 monks were relocated to a temporary shelter, made with tin corrugated sheets, in the outskirts of Kathmandu.

The living condition post-earthquake was very difficult for the nuns and monks because it disturbs their spiritual practice and mental wellbeing; pre-earthquake they lived alone in their own quarters, heavily focusing on meditation and individual education. The nuns have all settled with support from grant of AJWS through ACHR into their new earthquake safe homes through socio-technical support from Hunnarshala. Bakhang nuns rehabilitation project finished in 2017.

However, the monks still continue to live in earthquake shelters and they have not been able to resume their religious practice since the earthquake because they are now living in tight spaces shared with many other monks. With their realities completely shaken, the monks are worried about how they will resume their spiritual practice, go back to the monastery, and rebuild their lives again.



REHABILITATION and RELOCATION of MONK'S VILLAGE, PAKHEL, NEPAL

Before the earthquake, the monks used to stay in a monastery in Liping, exactly on the Nepal-China Border. After the earthquake, they were not permitted the rebuilding of the destroyed monastery citing security reasons. Therefore, the service society brought new land in the village Pakhel, near to the monastic town of Pharping.

To rehabilitate the monastery, Sengedag Service Society have partnered with Hunnarshala. Hunnarshala's vision for this project emphasizes on expansion of local technology and local capacity combined with a well thought-of design. Various low cost materials like stabilized adobe, and mud concrete for walls and brick panels for roof have been explored and tested. At present land has been purchased and Geo-technical investigation as well topography map has been created and planning has been done. The monks are directly involved in planning and implementing the rebuilding and various discussion sessions have happened. The site planning and unit designs have also been finalized.





The community managed reconstruction project, led by organization LUMANTI was designed to support reconstruction and repair of earthquake affected houses with people participation in community level decision making to reconstruction. The two-year long project has a target of providing support in construction and repair of 600 and 300 houses respectively. Hunnarshala Foundation has been working closely with Lumanti for technical support, capacity building, and handholding of the whole project. Apart from houses reconstruction, the project also covers infrastructure planning and implementation based on community need and requirements.



Hunnarshala Foundation is also giving support on community planning. In addition to these, the technical teams established in the four project sites are providing much needed technical assistance to the families through information centres, trainings, orientations on build back safer approaches.

On the April 25th, 2015, a strong earthquake of 7.8 in Richter scale shook Nepal causing massive damage across the country. It was among the worst earthquake in 80 years. The Post Disaster Government Assessment report has identified 14 districts in Nepal as the most severely affected by the earthquakes of April and May 2015. There have been over 9,000 casualties and approximately 23,000 injuries. Thirty-one of the country's 75 districts have been affected, and the Government of Nepal has characterized 14 of these as severely affected. Even after 3 year of the earthquake, the government and Non-government agencies are still struggling to support the affected families for reconstruction due to various political hindrances as well as natural cause such as monsoon and complicated process, which NRA had devised for grant disbursement.





MACHHEGAON

Machhegaon is one of the smallest communities located south west of core Kathmandu around 15 kms from the Kathmandu center, it is popular because of the old historic temple located at the center of the settlement. Though the temple was not damaged during the earthquake, many old houses around it and in the settlement were completely destroyed. According to the data collected through the rapid disaster assessment conducted by the community and local disaster management, about 70 % of the total households were completely damaged by the 25th earthquake. Of the total 800 households in the settlement, 473 houses collapsed and 118 houses were categorized as partially damaged.



CHITLANG

Chitlang is one of the village development committee (VDC) of Makwanpur District, a part of Narayani Zone. Its district headquarters, Hetauda covers an area of 2,426 sq/km. It lies at the north-west of Kathmandu city, 12 km from Hanuman dhoka. Similarly from south it lies 7 miles from Chisapani Gadi towards the entry point to the capital. And from East it lies 10km from Dashinkali temple towards the east. From west it lies 2km from Tistung Palung, where the temple Bajrabahari temple is situated. Chitlang is currently part of Thaha Municipality. is is the result of recent rearrangement of the governance system of the country.

The current total population of Chitlang is 7524 with 1252 households. Chitlang is also one of the areas, which is affected by the earthquake on 25th April 2015. More than 86 percent of the households are recorded damage. As of the data presented by the Chitlang VDC, 627 houses are fully damage, 293 are partially damage and 152 are recorded minor damage. Most of the houses constructed with bricks in mud mortar were not spared by the earthquake triggering severe cracks in their fabric which made them inhabitable.





SIDDHIPUR

Siddhipur is among the most affected areas in Lalitpur district. The damage assessment data collected by the local disaster management committee shows that of the 1100 households, 767 houses had collapsed and 278 houses were partially damaged. The active community organization in this area is Didi Bahini Women's Cooperative. Lumanti is partnering with the cooperative to support the affected families in rebuilding their homes and their lives. Siddhipur or locally known as Sanogaon, commonly known to people in Kathmandu as Sanogaan, is among the few traditional hamlets dotting around three cities of Valley. Siddhipur is noted for production of straw mats (sukul) and is still popular for its supply to other areas in the Valley.

THECHO



Thecho, a typical small compact old town, with about 2,352 households, is situated 9km south from Patan, a major bazaar area of Lalitpur district. Thecho is noted for production of organic mustard oil and is predominately an agriculture-based community. Most of the houses in the settlement were constructed in traditional Newari techniques with brick in mud mortar. Many of these houses needed immediate repair and re-habilitation without which they would have collapsed. The April 25th earthquake and subsequent aftershocks left as many as 544 houses completely collapsed and 410 partially damaged rendering many families homeless.

ORIENTATIONS and TRAINING WORKSHOPS

Rajendra Desai, an engineer based out of Ahmedabad with more than two decades of working on hazard prone structures was called for an orientation and training workshop in Nepal on building and retrofitting residences with hazard resistance features. Rajendra Desai has worked extensively on retrofitting of buildings affected by natural disasters in many regions, which he shared during the workshop with the engineers and architects from Lumanti. A separate component for on-field implementation was also organized during workshop to help the on-site team with supervision. The workshop gave the team from Lumanti an opportunity to discuss existing issues of retrofitting and new construction, while new solutions also emerged through various discussions.



RETROFITTING

The retrofitting work undertaken in the previous months, continued in three major sites, Macche-gaon, Siddhipur, and Chitlang. Six houses (One in Chitlang, three in Thetcho) were retrofitted in their entirety within this period, through community participation and capacity building of the local community and masons. On-site implementation and technical support was provided to the house owners and the team appointed by Lumanti.





Hunnarshala Foundation's major role has been to support, handhold and facilitate Lumanti's team during the course of reconstruction work in Nepal through the following:

Post Disaster Assessment: Aftermath of earthquake saw frenzy amongst the general population, government agencies and civil groups and organizations alike. Many buildings were fully or partially destroyed while many withstood the earthquake with minor cracks. The major responsibility of the reconstruction process was to conduct an assessment to ascertain which building could be retrofitted while which was required to be rebuilt. Hunnarshala supported Lumanti in the assessment process along with starting a parallel process with the community to convince them of retrofitting option as many families wanted to rebuild due to fear.

Design and Planning: The in-house team of architects and engineers of Lumanti got periodic support from architects and designers from Hunnarshala who have gained expertise of working in post disaster situations in multiple regions. The major challenges of design and planning were to include hazard resistant features while keeping the cost of the structures low.



Implementation: The on-ground implementation saw multiple challenges, ranging from social to technical to political. In couple of sites, the community was not organized which derailed the participatory process but gained momentum after many organizing efforts. At the implementation stage, many house owners were reluctant in building load bearing houses and wanted to build RCC framed structures. This was not required and would have increased the cost of building. Team of engineers from Hunnarshala supported LUMANTI to hold meetings where load-bearing structures were explained to build people's confidence.

On-Site Technical Support: Once the construction began, multiple meetings, site visits and discussions were organized to streamline the construction process and maintain quality control on all the ongoing sites. This entailed group meetings with supervisors, masons, and homeowners. **Capacity Building of On-Field Teams:** LUMANTI, team consisted of engineers and architects working on disaster rehabilitation project for the first time. They required constant handholding, capacity building and guidance throughout the course of the project which was provided through on-site field visits, technical assistance and training workshops.



STREET as PUBLIC SPACE, BHUJ



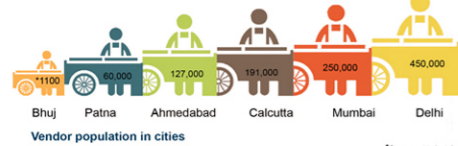
The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act - 2014
Provides for the constitution of Town Vending Committees (TVCs)

What is a Town Vending Committee ?

A committee that looks into the matters of street vendors. There must be a TVC under each local authority and if needed in each ward or zone under the local authority.

Roles of the Town Vending Committee

- Serve as a medium for organization of street vending profession.
- Key role in protecting rights of street vendors.
- Act as link between vendors and other interest groups.
- Balance rights of the general public to access and use footpaths and roads.
- Call for inclusive urban planning and more meaningful negotiations in matters relating to street vending.



* Figures yet to be taken
Figures from Ministry of Housing and Urban Poverty Alleviation, 2004

Hunnarshala began working on the street vendors in the second half of the year 2015 as it was observed to be one of the more prevalent livelihood options for the families in the slums that we had been working with. A small portion of one of the main streets of the city consisting of Jubilee Circle and Bhuj Haat was taken up as pilot, mostly to understand the dynamics of street vending. It was soon realized that street vending has had deep linkages with the streets, as well as the numerous stakeholders on the streets. Hence the work was expanded to traffic, and gradually to the streets as whole.

After the development of the DPR for the pilot project at the Bhuj Haat site, the work was expanded to the rest of the city through a study of the streets as public space of the city with street vendors as the focus. Ten streets were mapped and documented, including documentation of the networks on the streets that may be spilling out of the physical space but essential for the identity of the street. The work on the compilation of the final report on the study is currently going on.

Additionally, a parallel work was undertaken through the government policy on street vendors, Support to Urban Street Vendors (SUSV) under the National Urban Livelihood Mission (NULM). An IEC pamphlet was developed for the street vendors to make them aware about their rights and responsibilities. Bhuj Nagarpalika was also assisted in formation of provisional Town Vending Committee (TVC). The work still continues, with the next step being organization of the vendors of the city in an active association.



SHELTER FOR URBAN HOMELESS, BHUJ

Due to non-availability of work in their native villages, these people have no choice but to migrate for work but are never able to earn enough to build a good house themselves. The children in these communities are most vulnerable as constant back and forth migration prevents them to have education thus keeping the communities in a constant cycle of poverty. Most of the children end up working as child labour to support their meager family incomes.

As per the recent survey done by the Setu-Abhiyan, at present there are 18 migrant communities with 626 families in Bhuj, living in temporary settlements in various locations across the city. However, while meeting some other contractors, we have found another 300 families living in other parts of Bhuj. Though these communities have been coming to Bhuj for so many years, they still live in temporary shelters with no services owing to their temporal nature of migration. Most of the communities have strong ties in their native villages and go back to their villages for a period of 2-6 months.





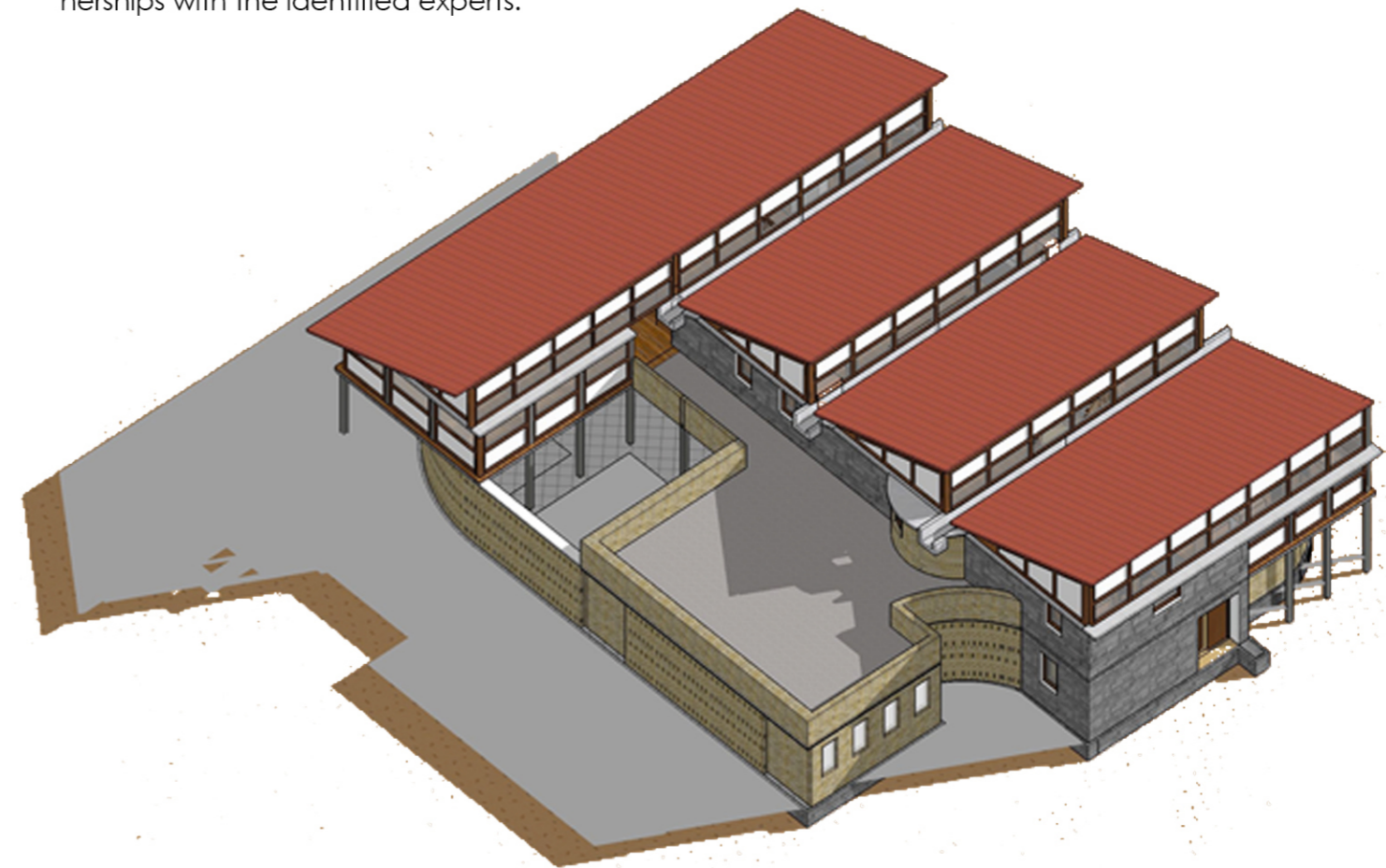
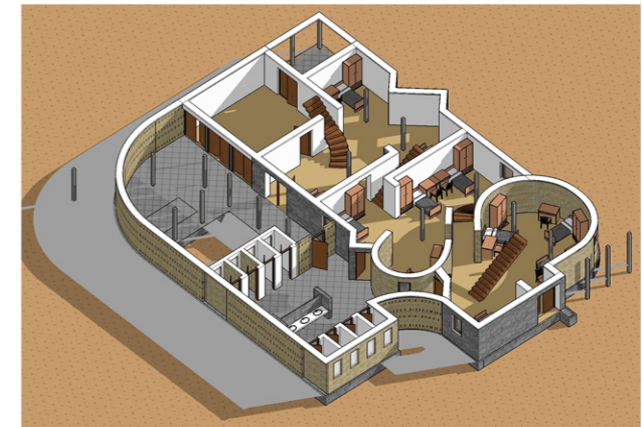
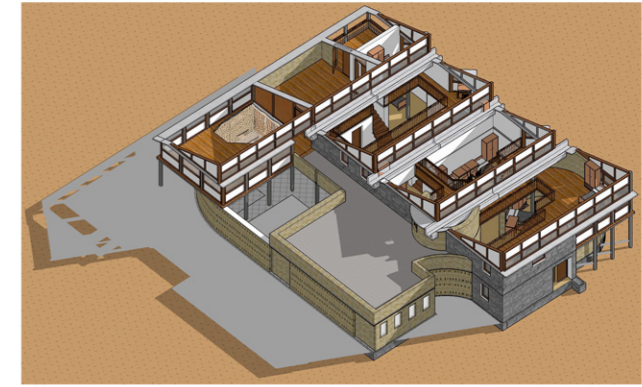
Hunnarshala has been previously working with Sahyadri School situated near Rajgurunagar in Pune district, on the water treatment systems and technology support for stabilized in-situ rammed earth through the artisan empowerment unit. The scope of involvement got expanded when the school commissioned Hunnarshala for the master planning of the campus, design of some new structures and retrofitting of some existing buildings.

The school is Krishnamurthy Foundation of India (KFI) School and hence the ideology of J Krishnamurthy becomes important for the approach of the above-mentioned commissioned interventions.



The project is majorly divided into two parts, master planning, and design. The design part includes design and implementation of some new structures like student dormitories or indoor stadium. It also includes the retrofitting of a few structures, mostly to increase the capacity of the function. Local material and traditional technologies are encouraged in the buildings. The planning part of the project consists of preparing a master plan for the school, which not only includes the architectural aspects but also the natural features/resources integrated with each other. For this, other experts have also been commissioned to work on the planning. In the first phase, experts of geology, water and biodiversity are going to be a part of this.

A series of workshops are also proposed to further strengthen the planning and designing, and to also help integrate the processes in the school curriculum itself, which is one of the major ideas of the planning exercise. It is expected that the development gives an opportunity to the school to further diversify the curriculum for the school giving them more enriching opportunities of explorations. Currently concept design for a dormitory and the indoor stadium is being developed, along with proposal of the first workshop on Adobe blocks. The planning part is currently initiating the partnerships with the identified experts.





The implementation of the program in 3 slums Bhimrao nagar, Ramdev nagar and GIDC relocation site are under progress with completing 174 houses, 93 houses are at finishing level, and rest of the houses in superstructure. The tender for the Infrastructure work for Drainage, water supply and roads have been awarded to the contracting agency by Bhuj Nagarpalika. Out of which the drainage work has been started and in all 3 areas. Implementation of Roads and Water supply work will also be begin in few days.



SLUM REDEVELOPMENT PROGRAM, Bhuj

“Baa Memorial” is a memorial garden for Late Shree Chanda Shroff, Founder of Shrujan, which has stay facilities as well. The objective of this project is to design residence by using green technology having less carbon footprint and provide livelihood to traditional building artisans by using appropriate technologies like Rammed earth, Stone Masonry, wooden sandwich roof etc. The site is in existing farm having many fruit trees, so the residence will be surrounded with trees and few trees will be inside the house and deck area. The architectural design is done and construction of house will start soon.





DOCUMENTING UNSTABILIZED RAMMED EARTH

A project to document and analyze Rammed Earth practices in North Gujarat was undertaken with the support from INTACH, New Delhi. Hunnarshala has been working with stabilized rammed earth since its inception, however there lied an unexplored territory of un-stabilized rammed earth, which needs to be understood and adapted. A lot of experiments have been done to stabilize Rammed Earth for greater strength. The stabilizers used are cement, lime and chemicals. Traditional un-stabilized Rammed Earth walls did not use external stabilizers for strength but relied on the chemical cementing properties of the soil itself. The report tries to document the practice of making Rammed Earth houses by the Garasia Tribals in the Aravalis. A special effort is made to understand the technology in the context of the house design, the changing socio-economic condition of the Garasias, the artisans and their technical understanding of the performance of Rammed Earth.



TRAINING WORKSHOP FOR RAMED EARTH ARTISANS

A three day training and workshop was organized for the artisans from North Gujarat. These artisans with a cumulative experience of more than a 100 years in un-stabilized rammed earth were invited to Hunnarahsla campus, to share their technique and method of making rammed earth walls. The objective of the conducting training workshop with the artisans of the region is to understand and improve the technology. In the last few years, rammed earth is being replaced with brick and cement construction due to urbanization and multiple other reasons.

The workshop was an attempt to understand the technique, and also look for ways in which Hunnarshala can start using it in its own buildings, by doing collaborative research on various soil types. The artisans were also introduced to stabilized rammed earth and had a sharing session with the artisans of "Layers – The Rammed Earth Company, an artisan entrepreneur company. The possibilities of organizing the artisans into an enterprise were also discussed.





This year the research collaboration between Hunnarshala Foundation and MIT Boston, USA was further strengthened by more research scholars taking forward the research work of testing various roofing options and conducting tests in mass housing project to understand and devise solutions from research perspective for the thermal comfort on the walls and roofs of the houses.



As part of this collaboration the research team is also exploring similar research possibilities for roofing solutions in the rehabilitation project post Nepal earthquake.

1. Mangalore tile with woden planks



2. Mangalore tile with mudrolls



3. Tin with Wooden plank



| Hunnarshaala Foundation for Building Technology & Innovations | | | | | |
|---|----------|------------------|---------------------|------------------|---------------------|
| BALANCE SHEET AS AT | | | | | |
| 31st March 2018 | | | | | |
| PARTICULARS | Note No. | As at 31-03-2018 | | As at 31-03-2017 | |
| | | Rs. | Rs. | Rs. | Rs. |
| I. EQUITY AND LIABILITIES | | | | | |
| 1. Shareholders' Funds | | | | | |
| (a) Share Capital | 2 | 1,01,000 | | 1,01,000 | |
| (b) Reserves and Surplus | 3 | 13,73,36,413 | | 13,62,60,085 | |
| | | | 13,74,37,413 | | 13,63,61,085 |
| 2. Share Application Money pending allotment | | | - | | - |
| 3. Non - current Liabilities | | | - | | - |
| 4. Current Liabilities | | | | | |
| (a) Trade Payables | 4 | 30,27,773 | | 35,00,831 | |
| (b) Other Current Liabilities | 5 | 1,23,08,298 | | 1,48,69,965 | |
| | | | 1,53,36,071 | | 1,83,70,796 |
| TOTAL | | | 15,27,73,484 | | 15,47,31,882 |
| II ASSETS | | | | | |
| 1. Non-current Assets | | | | | |
| (a) Fixed Assets | | | | | |
| (i) Tangible Assets | 6 | 2,42,70,930 | | 2,65,24,219 | |
| (b) Non-current Investments | 7 | 7,00,00,000 | | 7,00,00,000 | |
| | | | 9,42,70,930 | | 9,65,24,220 |
| 2. Current Assets | | | | | |
| (a) Inventories | 8 | 1,25,439 | | 1,44,183 | |
| (b) Trade Receivables | 9 | 62,04,706 | | 23,56,045 | |
| (c) Cash and Cash equivalents | 10 | 4,41,75,260 | | 4,22,19,781 | |
| (d) Short - term Loans and Advances | 11 | 64,49,073 | | 74,24,429 | |
| (e) Other Current Assets | 12 | 15,48,076 | | 60,63,224 | |
| | | | 5,85,02,554 | | 5,82,07,662 |
| 3. Miscellaneous Expenditure to the extent not written off or adjusted | | | - | | - |
| TOTAL | | | 15,27,73,484 | | 15,47,31,882 |
| Significant Accounting Policies and Notes to Accounts | | | | | |
| | 1 | | | | |

For Hunnarshaala Foundation for Building Technology & Innovations

For A S Shaikh & Co.
Chartered Accountants
Firm Reg. No. 139775W

For H Rustom & Co.
Chartered Accountants
Firm Reg. No. 108908W

Director Director

(Aslam Shaikh)
Proprietor
Membership No. 162345

(HRD Dalal)
Proprietor
Membership No. 31368

Place : Bhuj
Date : 18/06/2018

Place : Ahmedabad
Date : 18/06/2018

Place : Ahmedabad
Date : 18/06/2018

| Hunnarshaala Foundation for Building Technology & Innovations | | | | | |
|---|----------|-------------------------------------|--------------------|-------------------------------------|--------------------|
| INCOME & EXPENDITURE STATEMENT FOR THE YEAR ENDED 31st March, 2018 | | | | | |
| PARTICULARS | Note No. | For the year ended 31st March, 2018 | | For the year ended 31st March, 2017 | |
| | | Rs. | Rs. | Rs. | Rs. |
| I Revenue from operations | 13 | 2,94,57,618 | | 3,69,62,512 | |
| II Other Income | 14 | 92,55,298 | 3,87,12,916 | 89,47,865 | 4,59,10,377 |
| III Total Revenue (I + II) | | | | | |
| IV Expenses | | | | | |
| Cost of Materials Consumed | 15 | 7,93,251 | | 8,11,946 | |
| Administrative Employee Benefit Expenses | 16 | 19,03,425 | | 19,52,585 | |
| Depreciation Expenses | 6 | 24,36,346 | | 27,77,293 | |
| Expenditure on the Objects of the Organisation | 17 | 3,07,34,151 | | 3,91,02,162 | |
| Other Expenses | 18 | 17,69,415 | | 20,61,396 | |
| Total Expenses | | | 3,76,36,588 | | 4,67,05,382 |
| V Surplus/(Deficit) before exceptional and extraordinary items and tax (III-IV) | | | 10,76,328 | | (7,95,004) |
| VI Exceptional Items | | | - | | - |
| VII Surplus/(Deficit) before extraordinary items and tax (V-VI) | | | 10,76,328 | | (7,95,004) |
| VIII Extraordinary items | | | | | |
| IX Surplus/(Deficit) before tax (VII+VIII) | | | 10,76,328 | | (7,95,004) |
| X Tax expense: | | | - | | - |
| XI Surplus/(Deficit) for the period from continuing operations (IX - X) | | | 10,76,328 | | (7,95,004) |
| XII Surplus/(Deficit) for the period from discontinuing operations | | | - | | - |
| XIII Tax expense of discontinuing operations | | | - | | - |
| XIV Surplus/(Deficit) from discontinuing operations (after tax) (XII-XIII) | | | - | | - |
| XV Prior Period Expenses | 1 | | - | | 64,569 |
| XVI Surplus/(Deficit) for the period (XI + XV) | | | 10,76,328 | | (8,59,573) |
| XVII Earnings per equity share: | | | | | |
| (1) Basic | | | NA | | NA |
| (2) Diluted | | | NA | | NA |
| Significant Accounting Policies and Notes to Accounts | | | | | |
| | 1 | | | | |

For Hunnarshaala Foundation for Building Technology & Innovations

For A S Shaikh & Co.
Chartered Accountants
Firm Reg. No. 139775W

For H Rustom & Co.
Chartered Accountants
Firm Reg. No. 108908W

Director Director

(Aslam Shaikh)
Proprietor
Membership No. 162345

(HRD Dalal)
Proprietor
Membership No. 31368

Place : Bhuj
Date : 18/06/2018

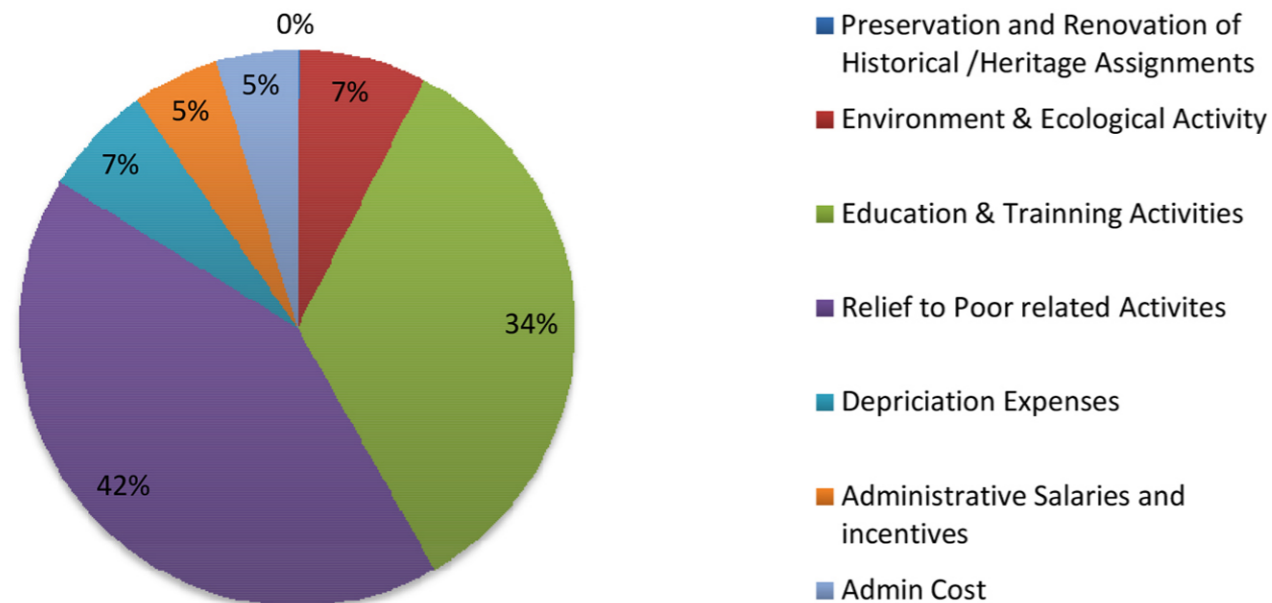
Place : Ahmedabad
Date : 18/06/2018

Place : Ahmedabad
Date : 18/06/2018

EXPENDITURE CHART 2017-2018

| Particulars | Amount |
|---|--------------------|
| Preservation and Renovation of Historical /Heritage Assignments | 34,160 |
| Environment & Ecological Activity | 28,05,013 |
| Education & Training Activities | 1,28,81,501 |
| Relief to Poor related Activites | 1,58,06,728 |
| Depriciation Expenses | 24,36,346 |
| Administrative Salaries and incentives | 19,03,425 |
| Admin Cost | 17,69,415 |
| Total | 3,76,36,588 |

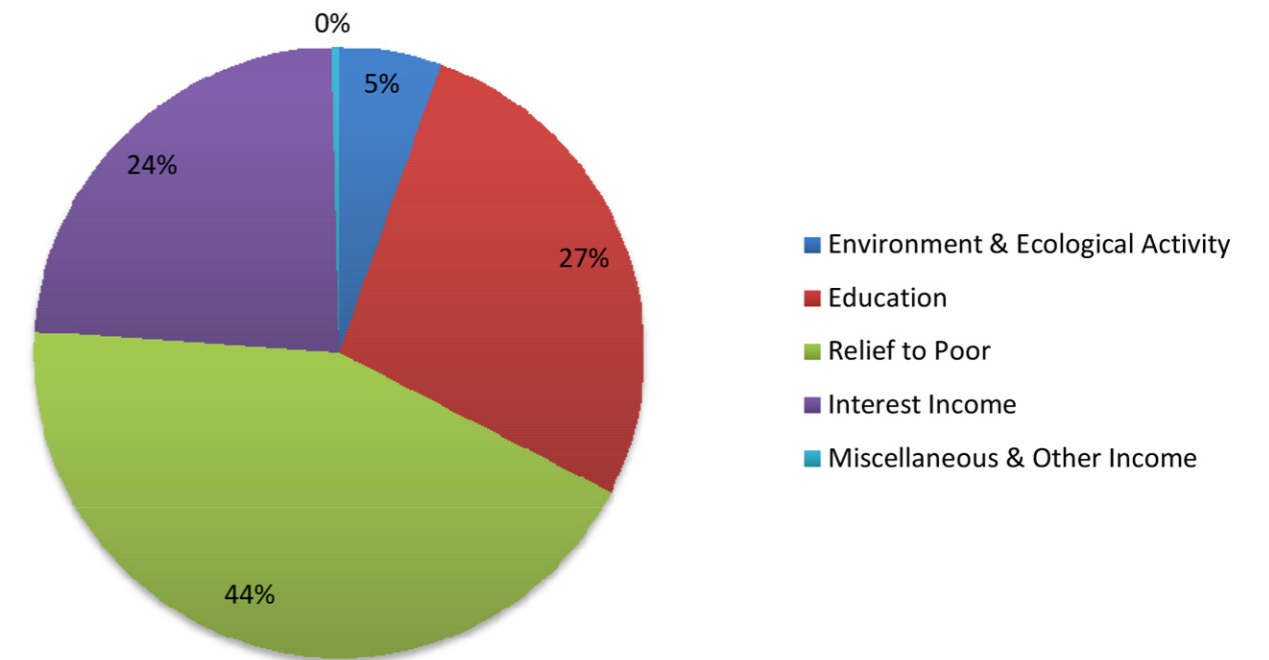
EXPENDITURE CHART 2017-2018



INCOME CHART 2017-2018

| Particulars | Amount |
|-----------------------------------|--------------------|
| Environment & Ecological Activity | 20,94,900 |
| Education | 1,05,11,073 |
| Relief to Poor | 1,68,51,645 |
| Interest Income | 91,08,522 |
| Miscellaneous & Other Income | 1,46,776 |
| Total | 3,87,12,916 |

INCOME CHART 2017-2018



BOARD OF DIRECTORS

Neelkanth Chhaya, Chairman
 Sandeep Virmani, Executive Vice Chairman
 Mahavir Acharya, Managing Director
 Tejas Kotak, Executive Director
 Kiran Vaghela, Director
 Tushar Dayal, Director
 Prof. Jagdish Kaup, Director
 Ramesh Sanghvi, Director

ARTISANS EMPOWERMENT UNIT

Bharat Chouhan, Assistant Supervisor
 Jignesh Gor, Project-in-charge
 Pradip Rangani, Project-in-charge
 Raj Chauhan, Project-in-charge
 Hemant Dudhiya, Project-in-charge
 Milap Gor, Project Supervisor
 Vishanji Gjjar, Master Artisans
 Poonam Chavda, Project Assistant
 Pankaj Bhagat, Project Assistant
 Satyam Bhavasar, Project Assistant

COMMUNITY EMPOWERMENT UNIT

Brinda Khiera, Accountant
 Dhiraj Thacker, Project Assistant
 Dinesh Charan, Project Assistant
 Hiren Gohil, Project Assistant
 Karamshi Rangani, Project Incharge
 Khimji G Chavda, Project Assistant
 Malaram Bishnoi, Project Assistant
 Rupesh Hurmade, Project Co-ordinator
 Bhawana Jamini, Consultant
 Aditya Singh, Project Co-ordinator
 Tapas Upadhyay, Project Assistant
 Madhu Jora, Social Worker
 Uday Jain, Project Assistant
 Gaurav Singh, Project Assistant
 Vijay Rabadiya, Project Assistant
 Arvind Naran, Project Assistant

MANAGEMENT COMMITTEE

Sandeep Virmani, Executive Vice Chairman
 Mahavir Acharya, Managing Director
 Tejas Kotak, Executive Director
 Prajesh Jethwa, Buisness Manager
 Nilam Sompura, Aministration Manager
 Chetna Varu, Finance Controller
 Atul Vyas, Artisans School Coordinator
 Mukesh Tank, Design Unit Head

ACCOUNT DIVISION

Kartik Mehta, CA Consultant

ADMINISTRATION

Uravashi Anjaria, Admin Assistant
 Jamnaben Rathod, Office Assistant
 Sitaben Buhia, Office Assistant
 Alimamad Sama, Driver
 Meghji Bhuchia, Watchman
 Savsign Makna, Watchman

INTERNS

Swati Kashyap
 Utkarsh Laharia
 Richa Mahida
 Abhinav Agarwal
 Vaishnavi Paralikar
 Haripriya. R
 Kartikye Bordoloi
 Jil Patel
 Spandan Das
 Gaurav Varshaney
 Indupriya
 Drishti Jain
 Aishwarya Kulkarni
 Ameer Shah
 Paras Pitroda
 Jaydeep Parmar
 Ramja Murali

KARIGARSHALA

Pangu Singh, Walling System Instructor
 Vasant Maheshwari, Carpentry Instructor
 Ganesh Mahla, Cook

