

Roofing for the Roofless

A Handbook on

Successful Project Impact of

Construction of Bamboo Houses to Tribes in Kurangani Hills
Comfortable Living & to Combat Climate Change



SELAVIP Foundation

GREEN

General Movement for Rural Education & Environment

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Preface

The **GREEN Society**, a native based, non-for profit organisation working for the welfare of the downtrodden masses, especially in awareness creation, education and training on Environment, Ecology and Biodiversity matters to the students as well as public in general in Theni District (TN), India since 1989.

Over 25 more years of Service excellence and a close working link with the community, **GREEN** has been implemented a special initiative on enhancing the participation of public in general on Environmental protection and Bio-diversity conservation Initiatives in its working area by focusing the awareness creation on Environmental Protection, Biodiversity conservation and Natural Resources Management, of the targeted community with result oriented approaches and community involved practices.

As such, one of its effort, our **GREEN** has specially designed a project initiative focusing the “Construction of 30 Bamboo Houses to Tribes in Kurangani Hills of Western Ghats of India in Theni District (TN) for a Comfortable Living and to Combat Climate Change by the year of 2016 and which had been supported by the “**SELAVIP Foundation – U.S.A.**, by financially and technically.

The project activities made considerable impacts and delivered the desired outcome as said in the proposal and made a positive changes and remarkable achievements among the targeted beneficiaries on the Comfortable living and combat Climate Change in their living localities. **GREEN** commenced the project activities by early April 2016 onwards and has put enormous efforts and close working in line with the project activities in every phase wise implementation and the **SELAVIP Foundation** has been supported extensively to make the productive results of the project focused.

This little Hand Book of it provides the details of it and can be guide for a Wise Model for Intervention in the field of sociological development of the Roof less Tribes in remote hills in specific.

A comment on his visit,

His Holiness, Fr. K. A. THOMAS (Tommy) S.J.

@ GREEN's Visitor's Note

Theni
22/10/2016

Dear Subhas Bose & Staff

I am really inspired by the wonderful work that you are doing for the marginalized tribal people of Kurangani Hills. Hello. I am really happy to hear from you and the beneficiaries about the many other wonderful projects undertaken by the Green Vision Society in Theni district of Tamil Nadu. I wish you all the best for the wonderful work that you are doing. May God Bless you. With love, prayers and Best Wishes

Fr. K.A. Thomas, SJ (Tommy S.J.)
22/10/2016



GREEN, a native based not for profit organisation working for Environmental protection, biodiversity conservation initiatives in Theni District, Tamilnadu State, India since 1989. It was implemented a special and innovative Project with the eminent funding support of SELAVIP Foundation USA by 2016. The project aims to construct Bamboo houses to the Tribes in Kurangani Hills at the southern stretch of Western Ghats of India.

GREEN had successfully completed the phase wise work of the project and the same has been visited by the SELAVIP Representative Fr. K.A. THOMAS (Tommy) S.J. during his field visit made on 22nd October 2016 (22.10.2016) and above is the comment of him.





Project Profile at a Glimpse

Goal

In order to assure the safe and secured living to the Shelterless Tribes in the working area, GREEN has proposed to provide comfortable living places – the Shelters to the Tribes living in the Kurangani hill in the Western Ghats of India, located in Theni District, Tamilnadu, India.

Further the aims focused that, to provide them low cost houses constructed with the help of bamboo and other locally available grass, lantana camara etc. Bamboo, care and Lantana camara are abundantly found in the region targeted by the GREEN. Tribal community can utilize these natural resources and can construct bamboo houses.

Phase wise Implementation

I phase: Identification, selection of Project beneficiaries and sites

II phase: Construction of 15 houses (15/30) to 1st set of project beneficiaries

III phase: Monitoring and Reporting – Requesting Funds for 2nd Instalments

IV phase: Construction of 15 houses to 2nd set of beneficiaries – Final Stage Works

IV phase: Project Completion and Evaluation

Features and Need of the Project

The tribal communities live in about 12 tribal villages isolated of Kurangani hills in Western Ghats of India and in mud houses constructed with locally available natural resources like grass, dry wood and stones around tribal hamlets/concentrations. They have no proper shelter for living and have no permanent constructed houses in the hilly areas because of their wandering nature as hunters-gatherers for livelihood. These indigenous communities have been encountering extreme climate change for generations and have developed several indigenous practices for survival and have adapted to adverse weather conditions in their own huts and dwelling places.

The need of the hour is to provide them with low cost shelters constructed out of the bamboo and mud in mountain villages so that they can live a contented life and keep their children away from wildlife, adverse climates and snakes.

Objectives:

- ❖ The main goal or objective of this project is to provide 50 poor indigenous tribes with affordable bamboo houses in Kurangani hilly areas.
- ❖ To brief the community about biological diversity Acts and Rules.
- ❖ To assure comfortable living and to meet the adversities of climate change.

The project has the most realised, intervened Activities to obtain the above said objectives along with the measurable outputs and results.



Project in Implementation

GREEN identified the need for supporting the Tribal living in Kurangani hills, Western Ghats for houses for safe and secure living and **GREEN** felt that could be also to combat the Climate change issues in local region as its features. Thus a Project has been designed with concepts and submitted for request to support to **SELAVIP** Foundation. The project was considered for Support and MOU Signed by **GREEN** Society for undertaking the Project activities. Comfortable Living to Tribes and Combat Climate Change are the most important Strategic intervention of the project which revealed greater impact on the target group.

This project aims to provide affordable Bamboo houses to the 30 poor indigenous tribes in the Kurangani mountainous areas for a comfortable life and to meet the adversities of climate change. As on the 1st set **GREEN** identified and selected the 15 Tribes as beneficiaries for the First Phase of supports. These Tribes beneficiaries were provided monetary supported for purchasing the construction materials for Bamboo houses.

A preliminary discussion and orientation have been made by the implementing agency, while **GREEN Secretary Mr. P.S. Bose** organised the meeting and explained the features of the project and the necessity of involvement and beneficial outcomes of the project. A detailed discussion on roles and responsibility of beneficiaries, plan of action for implementing the project, method of construction of houses with Bamboo steams and wooden barks etc.,

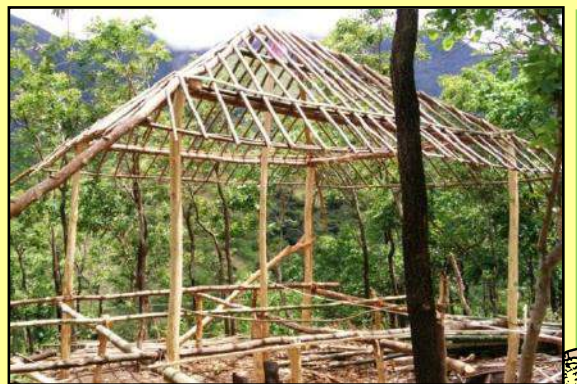
A team of staff members from **GREEN** and have initiated the basic operations with Tribal level panchayats bodies. A meeting with local Panchayat level leaders and representatives in the project site was organised and sought their support for providing land site approval for construction and plan for action for implementation of the project activities.

GREEN along with Civil Engineer had visited the project area and identified site locations for construction of Bamboo houses. The Civil Engineer had given technical as well as moral inputs to labours on measurements, technical methods for construction of bamboo houses. **GREEN** took primary role for implementing the project with local Tribal youth groups and Women SHG Federation which were assisted and support field works for this project.

GREEN built low cost houses constructed with the help of bamboo and other locally available grass, lantana camara etc. Bamboo, Cane and Lantana camara are abundantly found in the region targeted by the **GREEN**. Hence we have arranged to purchase the construction materials such as Bamboo Barks, Lantana Camera, Cane, Lemon Grass and other Grass etc., and made a contract agreement with the local civil construction experts. Laborers will be identified within the community in the tribal concentrations. We have also arranged other related utilities needed for construction along with the help of Tribal beneficiaries.

At the outset, **GREEN** convened a meeting with beneficiaries and decide the sites, materials have been procured, labor and time for completion of the housing Project etc., Laborers were identified within the community in the tribal concentrations area. The local Transportation of the construction materials were also done with the help of the beneficiaries. They also informed by **GREEN** about the structure and the direction of entrance facing east to suit their traditional culture and sets etc.

Project in Action : PHASE - I



Salient Features of the Project

- ❖ The Isolated groups of various Tribes (Muthuvas, Palliyars & Pullayars) are connected equally by project benefits
- ❖ **GREEN** works with community intervene model of project implementation
- ❖ Group discussion, Project planning were made collectively focused with targeted Tribal families
- ❖ Project implemented through the fullest cooperation of the Tribal Village Panchayats representatives
- ❖ Community Involvement and the engendered volunteerism of Tribal Youths on construction of Bamboo houses are much appreciated
- ❖ Utilising locally based available raw material for construction
- ❖ Collective involvement and community action created good reputation on the project implemented as well as **GREEN**
- ❖ A need based, novelty project components (such as **Green Toilet and Solar Lamp** provision to every houses) makes to complete the project benefits to Tribes.





Construction of Bamboo Houses:

There were 30 Bamboo houses were constructed completely and the beneficiaries are living in there. The Bamboo, Cane and Lantena Camera and other materials were used for construction. The large Bamboo Steams were put as pillars for construction, Canes for connectors and Lantena Camera Grasses were used for Roof thatching. The houses have adequate space for accommodate one Tribal family with 2 adults and with children. The walls, covered by Bamboo barks and the floor were made up of strong wooden plates connected with G.I steel wires with rigidity. All the constructed houses were made about 2'ft to 3'ft height from the ground supported on stand with cement concrete mixtures.

The houses constructed with free air flow with window openings and the inner sides are covered by native mats and carpets. The underneath space of each houses are used for livestock rearing like hen, goats and the Tribes kept their garden tools, equipments with safe under the place. As this project is thematically focused on the Climate Change adaption and Low Carbon techniques, the houses were not used up of other materials such as Plastic Sheets, Tin boards, Vinyl, Polymers, Synthetic materials for construction.

Saving Mechanisms Adapted:

The most eminent cost saving mechanism was adapted for construction of Bamboo houses. Since our project is focused for construction houses with Bamboo, and well it was a lower cost value with durability for construction compare than a normal house construction (used by Cement, Bricks, Steels etc.,) in the projects in other areas.

There has been the man, material resources were properly utilised in this project through the well planned work for implementation. All the materials used for construction is the locally based available natural resources such as Bamboo, Lantene Camera, Cane sticks etc., with durability in nature and Bamboo has a longer life time. Energy saving mechanisms was possible by the well planed and engineered designing model for construction of each house.

Contact establishments and Collaborations with Local authorities:

As far as our GREEN have been working for a long in the project area and have created good rapport among the working community as well as Government personals. This was highly useful to implement this project is a very successfully manner. The District Forest Department, Kurangani Village Panchayat, President of Tribal villages, Tribal Youth Club members were collaborated in this project initiative with **GREEN** by supporting through approval, permission and local endorsement. They were highly appreciated the Innovative efforts taken by GREEN through this project intervention which is entirely new in the area.

Green Toilet & Solar Lamps – a Special Initiative by GREEN:

As a community contribution perspective, our **GREEN** facilitated the Green Toilets to each of the constructed houses and providing Solar Lamps (A unit of 2 panels with Light to each houses) to each Tribal families living in the Bamboo houses. This can be bright their lives with safe living.





Project in Action : PHASE - II





Resulting the Project

Qualitative Results

The beneficiaries, Tribal women and children are living with most Safe and Secured houses in their native habitat with fullest enjoyment. Beneficiaries Participation is ensured in all phases.

Quantitative Results

- About 30 Bamboo houses constructed completely and about 138 Tribal men, women with their children, tribal elders are living in the houses and benefited by project.
- All the 30 houses were constructed by Bamboo, Cane and Lantena Camera Grass as per the specification mentioned in the Blue print and engineered design.
- Nearly 45 Tribal beneficiaries were supported by given the Training on Repairing & After maintenances of Bamboo houses for a longer utility.
- Nearly 12 more Tribal hamlets in remote and un-reach area in the hill were benefited by this project initiative.

Field Visit Observation & Events

Fr. Tommy S.J from **SELAVIP** Foundation as External Monitor had directly made a spot visit of the project area located in Kurangani hills with warm welcoming by the Muthuvars Tribal beneficiaries. He interacted the Tribal families living in the Bamboo houses. He observed the construction phases and utilisation of houses. He verified the planned activities of construction. He visited all the completed houses. He travelled over 7 kms along the pathway by vehicle and by walk to visit the Tribal houses by the project.

Before starting his Field visit, he had been interacted with **GREEN's** Staff Team and Office premises and knew about the various programs implemented by it. He goes along the remote habitats across the hills at where the Tribes constructed their own Bamboo houses for living which is scattered at different locations over 5 more Tribal hamlets.

Following are the Feedback and Suggestions recorded by Fr. Tommy S.J. on his visit

- He advised to complete the construction of Bamboo houses to rest of beneficiaries within the stipulated period
- He suggest to use the Tin Sheet for Roofing with Plastic Pipes for Fixing to enable the life of the Bamboo houses for longer use
- He appreciate the use of Bamboo Mats for inner cover of the houses
- He is being glad about the provision of Solar Lamp and Green Toilet initiatives would be rendered by **GREEN** will equip the benefits doubled
- He appreciated the wonderful works done by **GREEN** on phase wise implementation of **SELAVIP** Project

Fr. Thomas S.J. has enjoyed the visit and observed the field level implementation works at various approaches. He raised questions to the beneficiaries by Technical and Financial and satisfied. He well appreciated the creativity of Tribes on Construction of Bamboo houses and Thanked them for providing a wonderful hospitality during his visit.

From Roofless to Roofing : Progressive Development of the Project - A PHOTO View







Project Impact

Before implementing the project, the Scheduled Tribe beneficiaries lived in a very remote and inter habitats of dense forest area with their conventional method of housing which is not safe and most of them are shelter less and an un-safe living environment. Through this project intervention they are living in their Own house with a safe living habitat.

As this project focus the locally based available resource, all the beneficiaries are more eagerly participated in collection of Bamboo, Cane and Latene Camera, Grass and other non-timber forest produces used for construction and they involved in the construction process of their own houses. They enthusiastically involved in cooperation of each phases of project activities.

Several had exposed their Native Creativities (like Designing, Decorating) on their constructed houses. They interestingly partaking Labour works and assisting the Construction process.

In terms of Housing, now they have a safe Home for living in their originates. This increased their happiness and coping their normal lifestyle with natural way of living.

The Tribal Women & Children are living more safe and secured environment in the constructed houses, free from venomous reptiles, dangerous wild animals and able to combat climate and seasonal monsoons.

The Quality of life of Tribal beneficiaries is considerably improved by this project intervention. The Male members in the Tribal families are free from fear to adapt their wife and children in a secured house and go to job regularly.

This project makes understanding each other within the Tribal community members since they work together on the construction process and living together with the nearby places, thus the social development and family enjoyment, happiness are getting improved. The tribal women in neighbouring houses are work together on their household chores.

By the impact of the project, the District Administration and District Forest Division have ready to take into consideration of low cost housing schemes to the Tribal area. Our Secretary have attended the meeting with Govt officers and explained the salient features and impacts of the schemes. This was highly noted and will take into the consideration of the construction resort model in hilly tribal areas.

In general, this project made positive changes over the lives of Tribal beneficiaries in direct. About 138 of tribal are living in safe and secured houses and it creates sound effect on the neighbouring community by raise their demands for considering the same activity (construction of Bamboo houses) in their region too.

In particular, this project promotes comfortable living zone especially the newly married, young Tribal couples with privacy and secured. They are really happier in living with the Bamboo houses with their small family in a safe manner.



The initiative of Green Toilet is made a considerable impact, especially the Tribal Women and Young Tribal Adolescent girls for rest room provisions in their nearby home and free from outside sources. This was highly appreciated by the Tribal community and they felt much better and comfortable living within their household level with their Green Toilet and Latrine facilities provided by the project as additional initiative of our **GREEN** as Own Fund & Matching grant perspective.

Furthermore **GREEN** have provided “Solar Lamp” to each house made remarkable impact of the project, the Tribal family with children have a safe living condition event at night times.

Through the project impact, our **GREEN** Society made a remarkable accomplishments of the Construction of Bamboo houses to Tribes for comfortable living and combat climate change under the eminent support of **SELAVIP** and there were 30 Tribal beneficiary families were supported and the project becomes reached its real time working in field view and we found that the emancipated the beneficiaries in the project were considerable in limit through the participation, involvement and coordination.



We Thanks to GREEN - SELAVIP Project



Beneficiary's overview on the Project - in their Voices

" We construct our Own House live with my children more safe and Happy " Thanks to GREEN-SELAVIP



We felt the sense of Ownership thanks SELAVIP



My Hill,
My Family
My Bamboo
House



We have Safe house for living



Our Tribal women have secured houses



" We construct our Own House live with my children more safe and Happy " Thanks to GREEN-SELAVIP

It gives privacy, Secured and Recreation to my Family. Thanks to GREEN - SELAVIP



Marching for Sustainability

In final, all the completed 30 houses are in supported to the Tribal beneficiaries; they are using it for living with comfortable and safe manner. The projects reach its sustainability and it's working by living. The provision of Green Toilet and supply of Solar Lamps makes each house with a comprehensive living zone to the shelter less Tribal in Kurangani. The Impact revealed much more by the Tribal groups and the neighbourhood community too. It is a best model for replicable in other areas.

As far as the Bamboo Construction houses are based on the best engineering model, thus it has a longer life and durability for living. The materials used (such as Bamboo, Care sticks) are having long-lasting life and efficacy, thus the Tribal lives in the Bamboo houses constructed by this project intervention for a longer period. There is a only need to renovate the Roofs (i.e made us of Latena Camera grasses etc.,) and this can be done by the Tribal beneficiaries every year – during the yearly festival “Pongal” by January of every year.

GREEN had organised the Tribal Youths Community to strengthen the partnership between the Tribal beneficiaries of this project, this will helps to utilise the project benefits properly through periodical meetings, communication and to support on minor repairing works with one another

GREEN had given the Orientation Training on Repairing & Maintenances to the Tribal beneficiaries; this will make them to proper use and preserve houses in a proper way by the upcoming years. Furthermore the project implementing agency, **GREEN** will do the periodical visits to the project area, guide the tribal beneficiaries for better maintenance and extended project benefits for sustainability.



GREEN - SELAVIP Project Team



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