

# AN OTHER INTERNSHIP REPORT

on Summer Internship (may-june, 2013) done by Rahul anand, at an NGO called LEDeG situated in Leh, as part of the required curriculum. He is currently pursuing Masters of Design course at IDC IIT Bombay. Year 2013. 126130006



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# ACKNOWLEDGEMENT

To my loving parents and sister, thank you, for all your enduring support and endless encouragement.

To my IDC Faculty, for guiding me through the field of design and formulating the core principles of design philosophy and encouraging me to explore new places and rural backgrounds during my internship.

To people at LEDeG, Leh, especially Thinlay and Mr Lobzang Tsultim, for providing me a wonderful opportunity to work at the organisation and become part of various projects during such a short time period.

To Mauli, Yutaka, Stanzin & Petrujska for providing me great time at LEH, making me feel at home.

To Anand, Siddhartha,Vinoth & Kislay for keeping me sane.

— Rahul Anand, July Seven, 2013

# INTERNSHIP BACKGROUND



i wanted to do my summer internship in a rural backdrop so as to understand the various issues and the lifestyle being followed there, which would give me a meaningful insight into the needs and solutions required for such regions. Moreover i wished to do it in a remote region which is still untouched by the current technology and modern lifestyle, which would help me to see the old technology and ways of doing things as it happened before industrial revolution. For this same purpose i chose ladakh as my workplace and applied for a voluntary internship at one of the prominent NGOs called LEDeG situated in Leh. They responded to my application and appointed me to join from 30th June 2013.



**THE NON GOVERNMENT  
ORGANISATION CALLED  
LEDEG**  
LADAKH ECOLOGICAL DEVELOPMENT GROUP

In 1978, four years after Ladakh was opened to tourism, Helena Norberg Hodge, a scholar of the Ladakhi language, started the 'Ladakh Project' over the concern that the winds of change might prove too strong for the fragile roots of a culture that had developed tenaciously over the millennia in an equally fragile environment and change would need to be carefully guided.

In 1981, LEDeG grew as an indigenous institution out of the Ladakh Project (now ISEC). In 1983, it was registered as an autonomous NGO under the Societies

Registration Act of India. In 2011, LEDeG will complete 30 years of working to promote ecologically sustainable models of development in Ladakh.

The Vision of LEDeG is to create/maintain a sustainable future for Ladakh region deriving its inspiration from the local culture and environment and incorporating adept modern technology also.

# HIERARCHY OF MANAGEMENT

LEDeG has 32 full-time employees who tend to the general administration and implementation of various projects. In turn, employees report to a working committee of eight members through an appointed Director.

Each year, the organization has several national and international volunteers who get involved in various ongoing projects in Leh satisfying the organization's need for staff.

I was one such volunteer, helping the organization in various schemes and ongoing projects as per my skills. I reported to Thinlay, the alternative technology head and for some projects I worked directly under Lobzang Tsultim, the director of the organization. I was working at the head office of LEDeG which is situated in Karzoo, Leh.



# AREA OF WORK



## THE SCOPE OF WORK WAS VARIED IN NATURE, RANGING FROM ARCHITECTURE TO DESIGN.

The area of work was a varied one, which utilised my skills as an architect as well as a designer. From working on the quality improvement of the Compressed Stabilised Earth Blocks (CSEB) to designing packaging for LEDeG produced Apricot Oil, it was always new, fresh and challenging. I also took part in preparing questionnaires and surveys thereafter. Interestingly I also became part of the editing, graphics & subtitling team for a documentary on water conservation called "Chhuu". Documenting Rural Building Centre, the handcrafts and food

processing units of LEDeG through photographs and finally to make a brochure out of them was also an exercise in creative work flow.

Practically there were no limitations to any of these excursions, except one, and that was "Time". I had to leave a few projects in the middle of it, but thanks to distance communication technologies available today, I hope to continue working on those projects.

# PROJECTS

**01**



DESIGNING  
CSEB MIX

This project involved designing a perfect mixture for getting high quality compressed stabilized earth bricks. It involved a lot of experimentation.

page 7 Design Brief Constraints  
page 8 page 3

**03**



DESIGNING  
POSTER

This project was about designing a road side hoarding which depicts the importance of water conservation in context of underground water reserve.

page 1 Design Brief Constraints  
page 2 page 3

**02**



DESIGNING  
LABELS

This involved designing of various labels, including front packaging for apricot oil bottle and price tags for some other products, produced by LEDeG.

page 1 Design Brief Constraints  
page 2 page 3

**04**



DESIGNING/EDITING  
DOCUMENTARY

This involved in video editing/graphic design & subtitling of the documentary on water conservation in laddakh region.

page 1 Design Brief Constraints  
page 2 page 3

**05**



DESIGNING  
QUESTIONNAIRE

This involved designing of questionnaire for guest houses and public to gauge the water consumption and sanitation services being used by them.

**06**



SEEING/DOCUMENTING  
LOTS OF  
STUFF

A lot of things which i saw during the journey to the LEDeG units, photographing the locals weaving and making fruit products,visits at Rural Building center and similar stuff. I have to make brochures out of this documentation.

# DESIGNING A BETTER MIX FOR CSEB\*

\*Compressed Stabilised Earth Block/Brick

## Project Background & Constraints:

LEDeG has a Rural Building centre about 15 kms from its main office. The Centre has various facilities to manufacture building materials ranging from CSEB blocks to Ferro cement roof vaults. It supplies this building material to local construction sites.

The Rural Building Centre at Leh, has been trying to achieve quality CSEB blocks for quite some time(around 2 years). But it was noticed soon, that the bricks were not of similar quality as their counterparts in other regions. Despite of using stated ratios and using latest machines the quality of the resulting blocks is poor.



RURAL BUILDING CENTRE, LEH





**TO DESIGN A BETTER MIX IN  
CONTEXT OF LADAKHI SOIL FOR  
THE COMPRESSED STABILISED  
EARTH BLOCKS SO AS TO  
ACHIEVE BETTER PERFORMANCE  
AND HIGHER STRENGTH BRICKS  
FROM THE PROCESS.**



#### About CSEB

CSEB is a very sustainable way of building bricks, which is quite popular in many parts of the world. It requires a certain mixture of soil, cement and other required aggregates which is compressed in a high pressure manual/automatic machine to get bricks. An intensive research at various building centres have established general ratios of these elements to get good quality bricks..

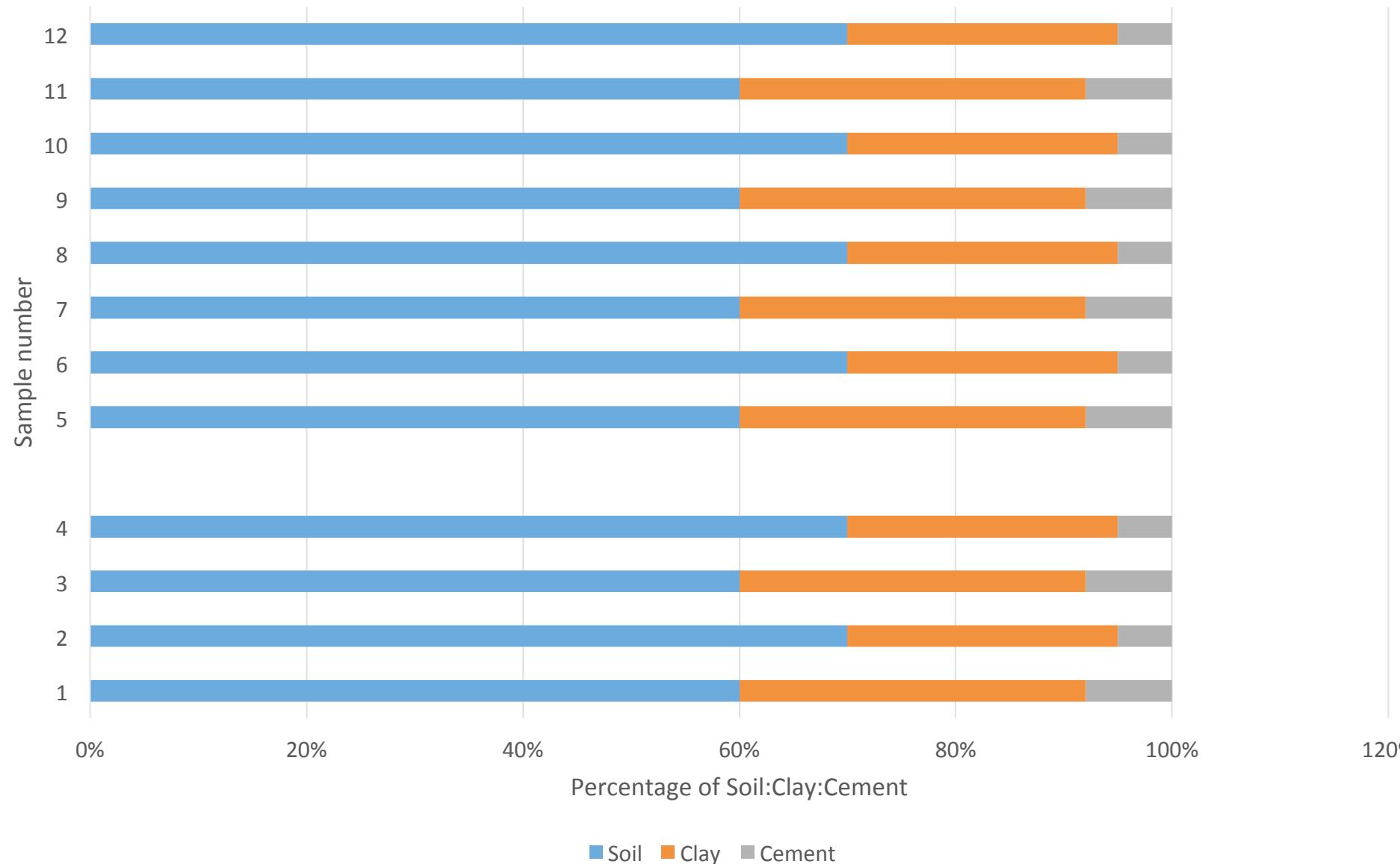
Specialists from LEDeG took the soil and brick samples to Auroville Earth Institute



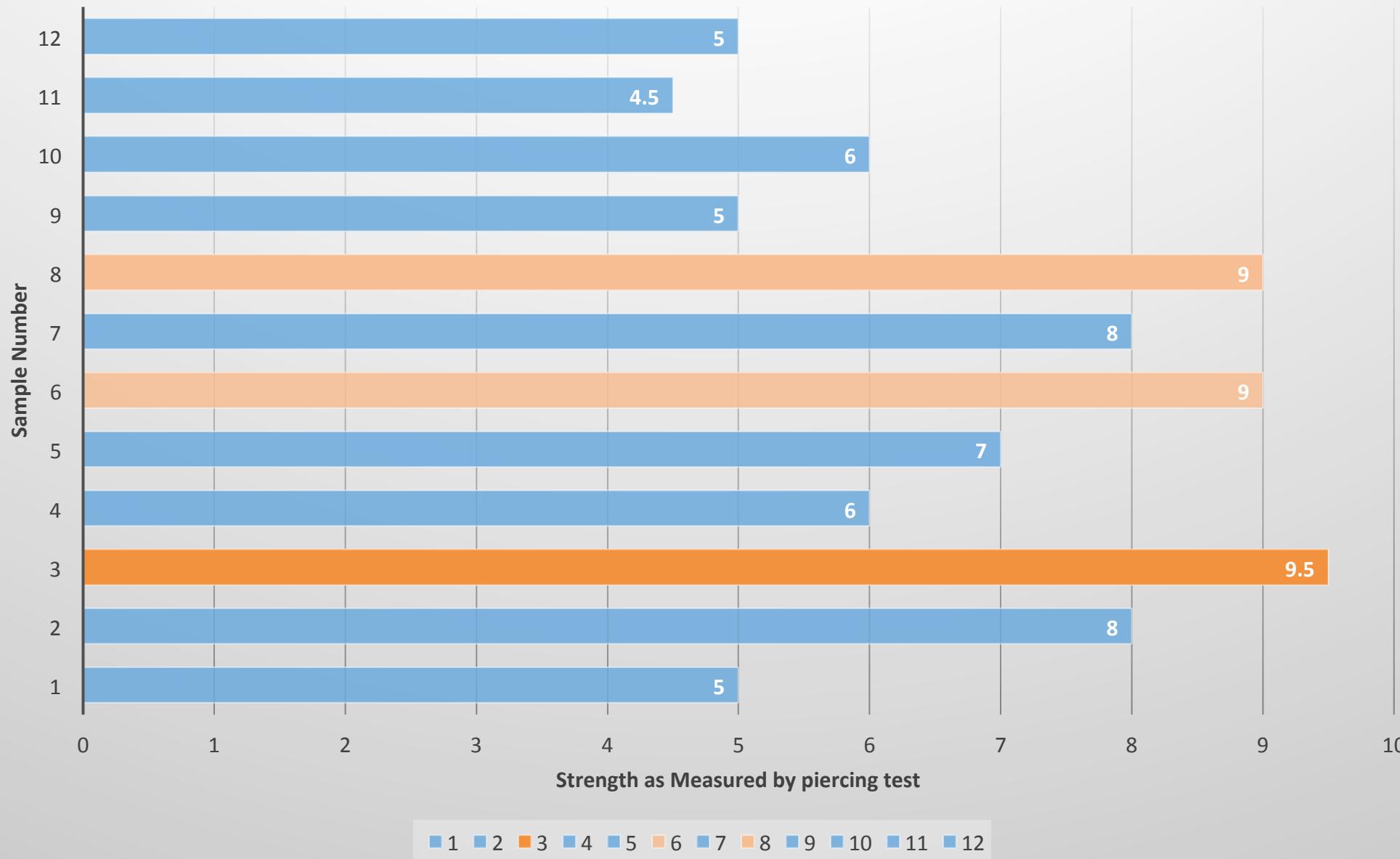
## Notings of different ratios, soil of origin and other data for different samples

Sample Number	Soil	Clay	Cement	Drop test	Final strength results (after curing)	Sample Number	Strength
1	60% (sandy, and too much gravels)	30-32% (gonpa)	8%	Fail, completely shattered(80% shatter)		1	5
2	70% soil different (the one with less gravel)	20-25% (gonpa)	5-6%	Breaks into blocks (not completely shatters) 60% shatter		2	8
3	60% (the one with less gravel)	30-32% (sampled from the hard layer of soil, spituk monastery)	8%	Breaks into blocks, shatters considerably less than all previous samples 40% shatter		3	9.5
4	70% soil (the one with less gravel)	20-25% (sampled from soft layer of soil, spituk monastery)	5-6%	70% shatter		4	6
5	60% (the one with less gravel)	30-32% (sabu village)	8%	60% shatter		5	7
6	70% soil (the one with less gravel)	20-25% (sabu village)	5-6%	50% shatter		6	9
7	60% (the one with less gravel)	30-32% (matho monastery)	8%	60%shatter		7	8
8	70% soil (the one with less gravel)	20-25% (matho monastery)	5-6%	50% shatter		8	9
9	60% (the one with less gravel)	30-32% (shang village)	8%	80% shatter		9	5
10	70% soil (the one with less gravel)	20-25% (shang village)	5-6%	70% shatter		10	6
11	60% (the one with less gravel)	30-32% (stok village)	8%	90% shatter		11	4.5
12	70% soil (the one with less gravel)	20-25% (stok village)	5-6%	80% shatter		12	5

## Ratio of Various Components of CSEB Mix Samples



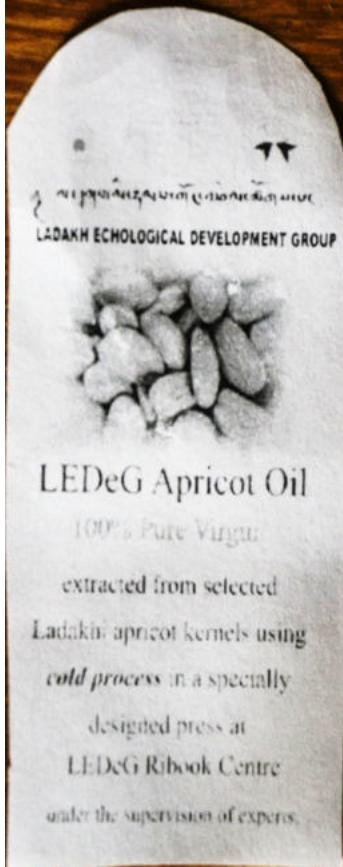
## Strength of Different Samples Compared



## The Final Mass Produced Blocks from Sample 3 Specifications

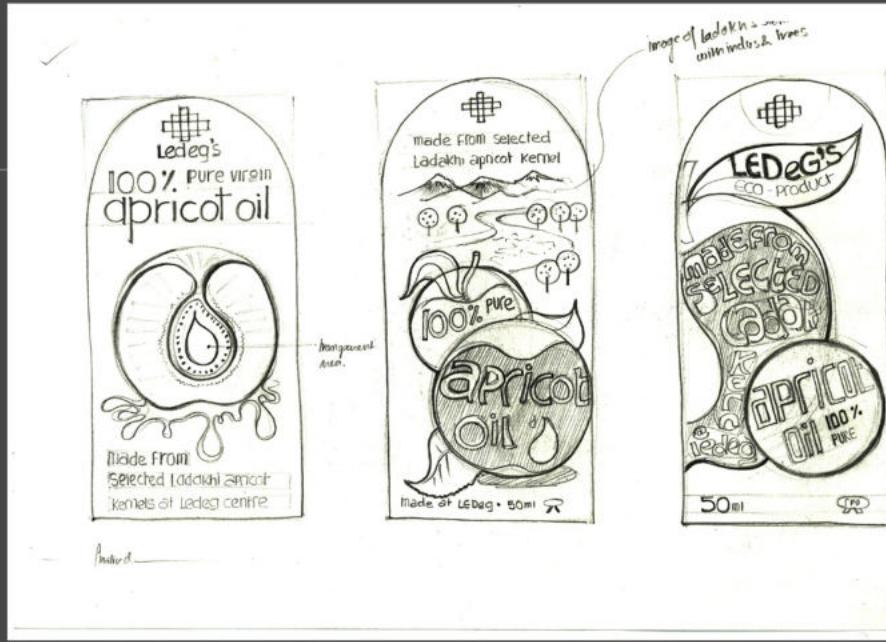
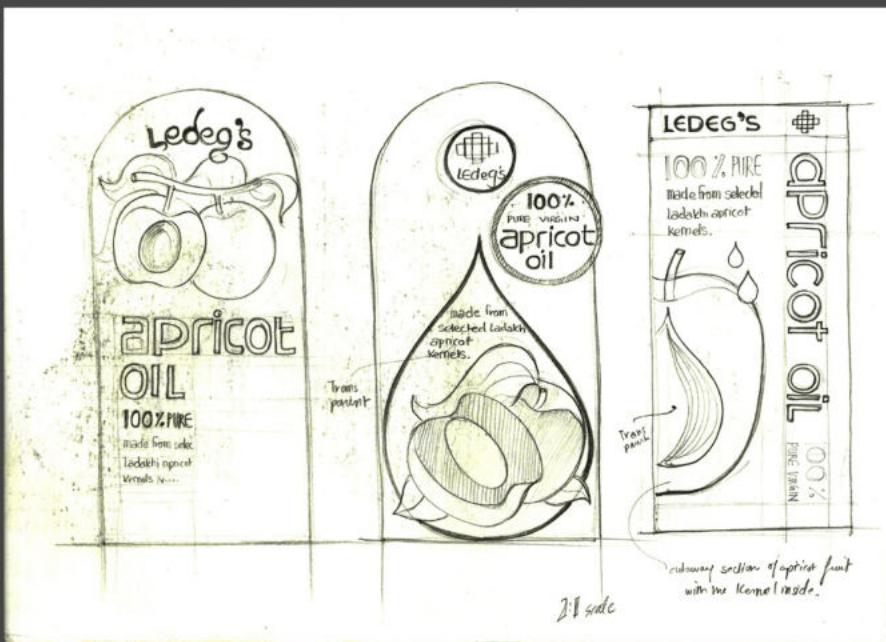


# PROJECT TWO



The original  
Front for the  
apricot bottle

TO DESIGN A FRONT COVER FOR  
THE APRICOT OIL BOTTLE. THE  
APRICOT OIL WAS TO BE EMPHASIZED  
FOR BEING PRODUCED  
BY SELECTED LADAKHI APRICOT  
KERNELS.





Manufacturing of Apricot oil through machine processing



The new front designed for the apricot oil bottle



Price tag designed for The Ledeg hand Crafted Cloth products

# PROJECT ENVIRONMENT DAY



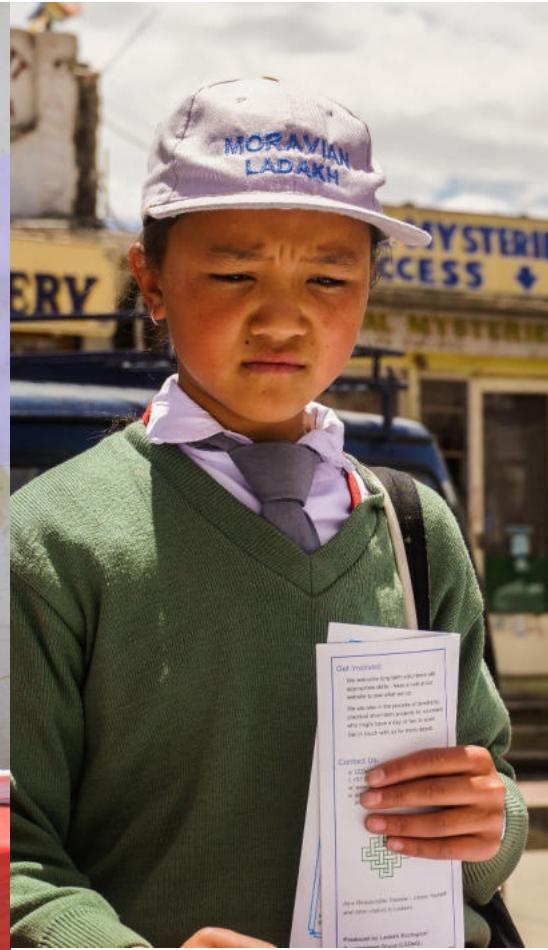
5TH JUNE IS THE WORLD ENVIRONMENT DAY. BEING A NGO GEARED TOWARDS SUSTAINABLE DEVELOPMENT OF LADAKH REGION, WE THOUGHT OF DOING SOMETHING TO INFORM AND RAISE AWARENESS ABOUT THE DAY IN THE LEH CITY.

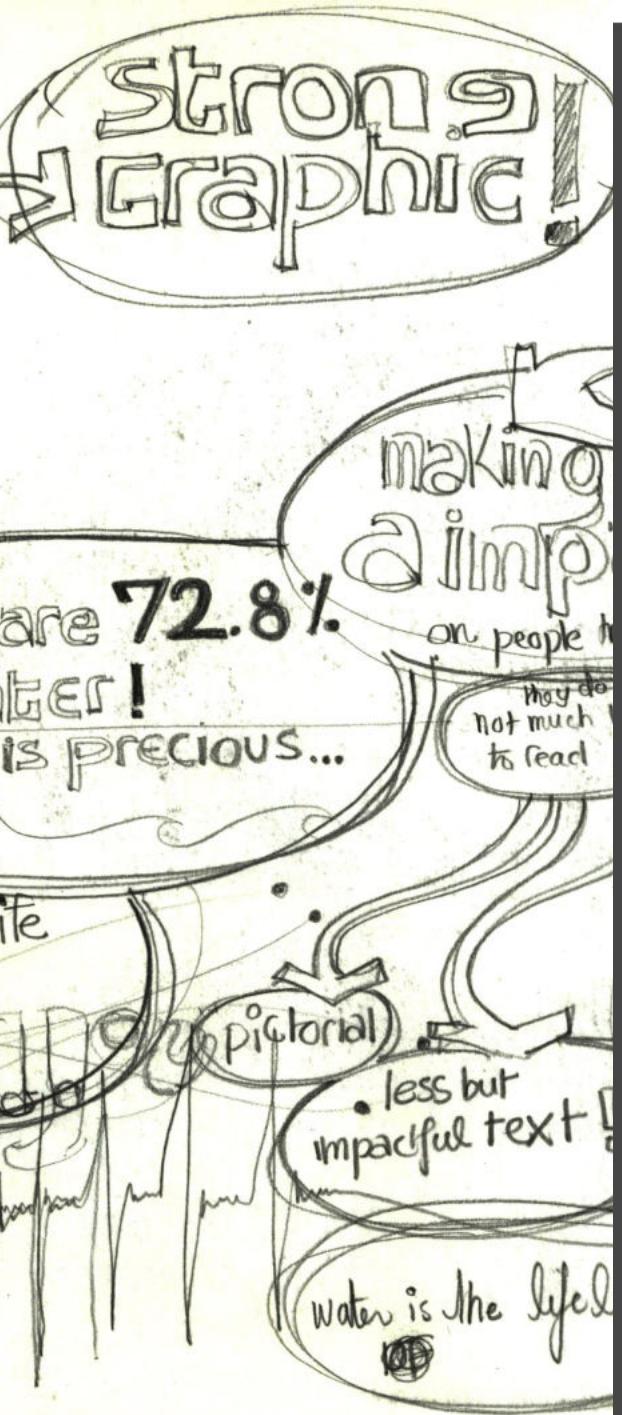


The distribution stall in main market Leh.

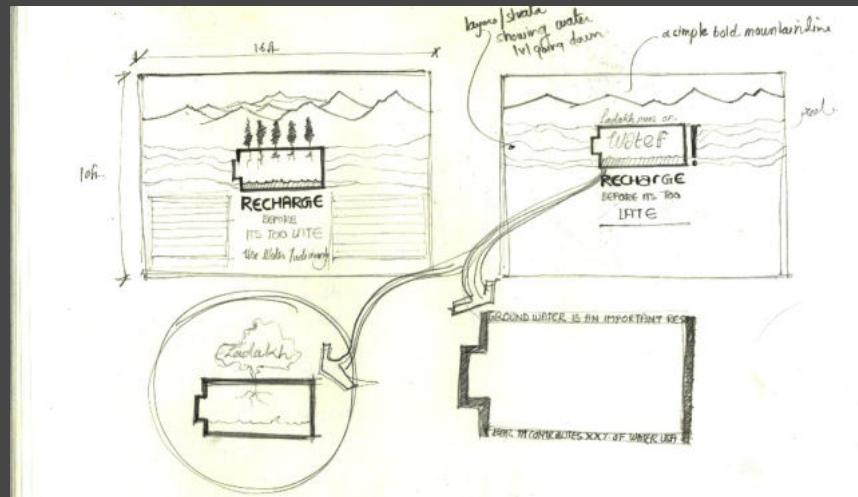
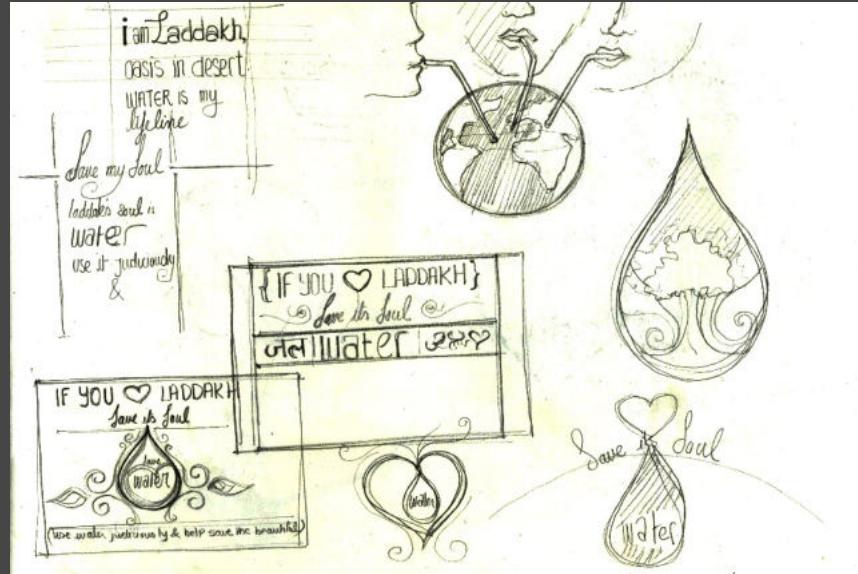


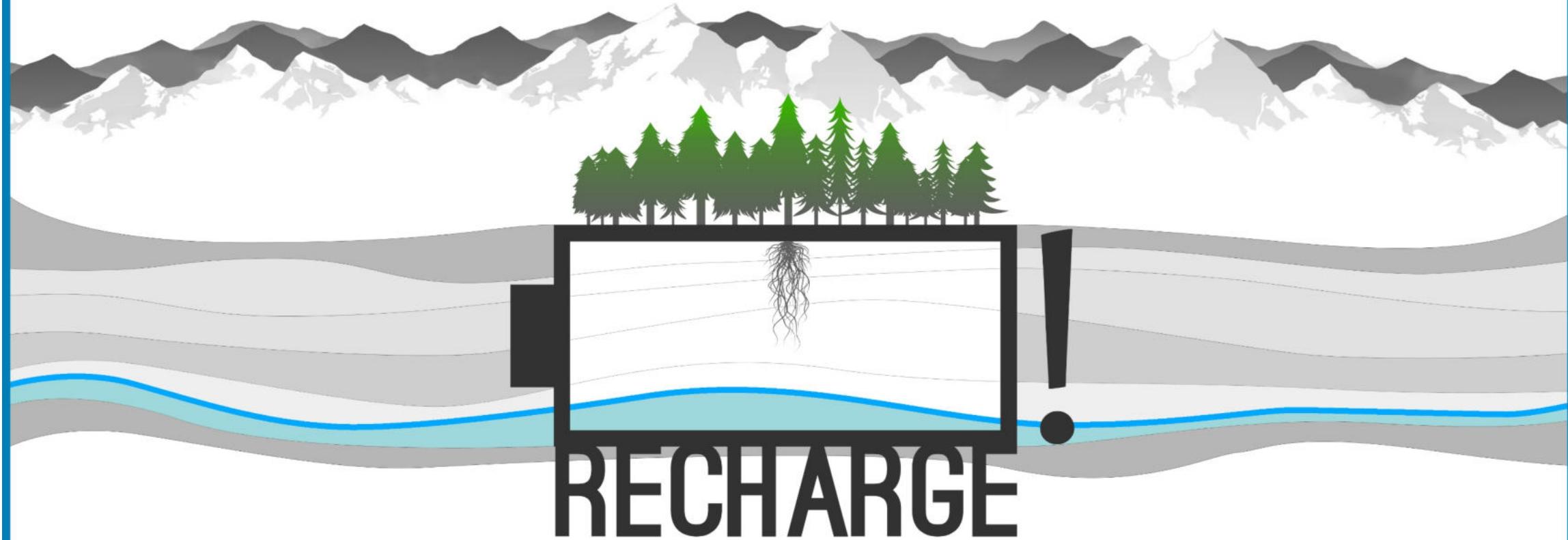
The Impact





TO DESIGN A POSTER, SIZE 16'X10' TO BE PLACED ON THE LEH-MANALI HIGHWAY WHICH ALERTS/INFORMS THE PEOPLE ABOUT THE IMPORTANCE AND WISE USE OF WATER IN LEH, THE CONTEXT BEING THE UNDERGROUND WATER.





SAVE WATER before ITS TOO LATE

ਸੰਧਾਰਣਾ ਦੀ ਸਾਡਾ ਸ਼ਕਤੀ ਹੈ। ਕੁਝ ਦਾ ਕਹਾਂ ਸੀਧੇ ਸਾਡੇ ਹੋਣੇ।



a LEDeG  
initiative

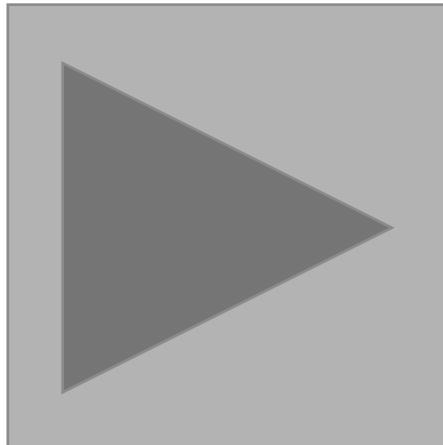
UNDERGROUND WATER IS A PRECIOUS & LIMITED RESOURCE, USE IT WISELY





TO FORM AND  
BECOME A PART OF  
EDITING TEAM,  
ADDING GRAPHICS  
AND SUBTITLING THE  
VIDEO DOCUMENTARY  
“CHHUU”

My task was to approach the Secmol Audio/Video studio, form a team and cut short the video to around 10-15 minutes. Also as the graphics/effects incorporated by the original editor were not up to the mark, they had to be updated as well. Finally, as the documentary was in local language –bodig, it was required to be subtitled the documentary in English. This was done with the help from an eminent scholar, Mr Schmitt at LDeG with the help of Thinlay Dorjai.

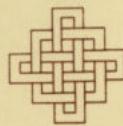


## Ongoing Work:

Photography for Brochure for Handicrafts produced through Self Help groups under LEDeG



## Completion Certificate.



ਲਾਡਾਖ ਐਕੋਲੋਜਿਕਲ ਡੇਵਲਪਮੈਂਟ ਗ੍ਰੂਪ

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### Certificate of Internship

This is to certify that Mr. Rahul Anand, Roll No 126130006, M. Des. Product Design, IDC ,IIT, Bombay has successfully completed 1 month of voluntary internship with Ladakh Ecological Development Group, during the period from 30<sup>th</sup> May to 1<sup>st</sup> June 2013.

During his tenure with us, Mr. Rahul lent us his architecture and designer skills for the quality improvement of CSEB blocks and design of various Brochures, Posters & a Documentary "Chhu" related to ongoing projects and schemes of LEDeG. His sense of commitment and diligence to his assignments and his contribution, in a short span of time had been marvellous.

We wish Mr Rahul all the success in his endeavour and a bright future.

Executive Director

No LEDeG/Volunteer/2013/240  
Dated 01/07/13