

AVEI NEWSLETTER



Send us your soils for the Rammed Earth Stele

IN THIS ISSUE

- ICOMOS General Assembly page 2
- Certitude-SK Road Stabilization page 4
- Drone Video of Sharanam page 5
- AVEI Visitors page 5
- Open House & Rammed Earth Stele page 6
- Hilary's book corner: *HRIDAY Reflections* page 6
- NEW Wind Turbine Design Course page 7
- New Team Members page 8
- Call for Soils! page 10
- AVEI Training Course Schedule for 2018 page 12

The cool winter months are upon us and the Earth Institute is concluding Phase II of Sharanam, assisting with the construction of a stabilized earth road along one of Auroville's main thoroughfares, and preparing for the many training courses ahead.

Soil samples are coming in from all over the world for the commemorative rammed earth wall planned for Auroville's 50th anniversary. Want to contribute soil from your region too? There is still time to send it to us! And come visit the Earth Institute in February when we will have a two-day open house, showcasing our work and introducing visitors to earthen construction.

The team has grown with new and returning members, including a graphic designer. Look in the coming months for our improved visual identity in communication materials and around the campus.

Please feel free to share this newsletter with your friends and colleagues as we spread the knowledge of earth architecture to the world!

Earthily yours,
The AVEI Team

**ICOMOS
General Assembly**

In December, Lara participated in the ICOMOS General Assembly & Scientific Symposium "Heritage and Democracy", a triennial gathering of expert members of the International Council of Monuments and Sites. 1,090 professionals from 102 countries attended the 19th General Assembly, which was hosted by ICOMOS India and held in Delhi from 11th to 15th December. The theme "Heritage and Democracy" particularly investigated how conservation as a field is changing to focus more on the democratic process and relationship between communities, cultural landscapes, constructive cultures, and heritage buildings.

Some particular aims in our participation were to study state-of-the-art approaches to

historic building conservation, to gain perspective on heritage work in India, and to interact with other global experts in earth and masonry conservation. Our principle motivation is to strengthen the bond between contemporary building practitioners and heritage conservation specialists who work with natural/ local materials. Further, we wish to make closer contact with the network of conservationists working with earth in India, as earthen and vaulted structures are extremely under-represented on the subcontinent.

Towards these aims, Lara participated as a listener in a meeting of the International Scientific Committee on Earthen Architectural Heritage (ISCEAH), and had some very interesting discussions with experts like Pankaj Modi (collaborator of Prof. Jagadish on a manuscript of

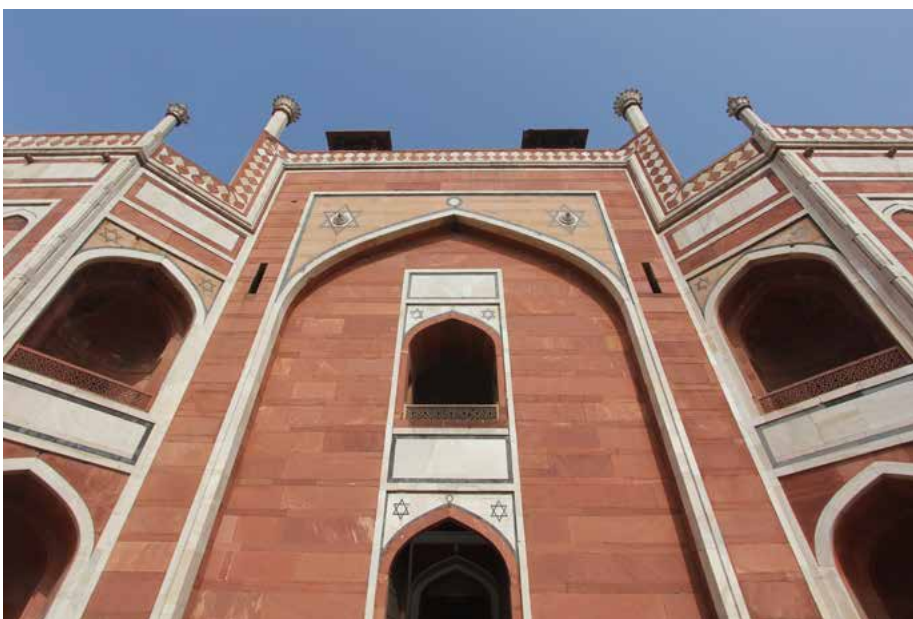
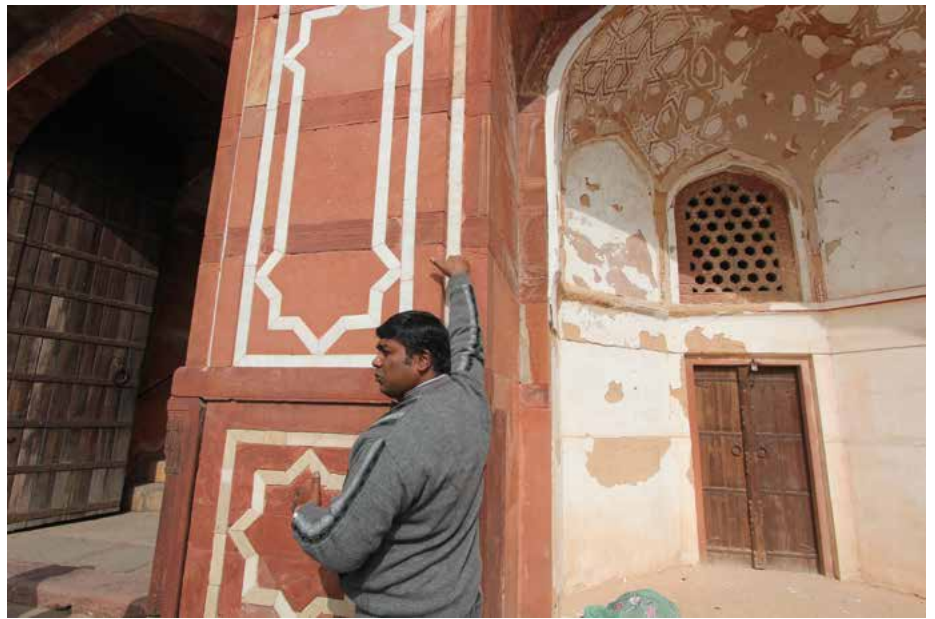
vaulted structures in South India), Prashant Banerjee (conservation architect of the Aga Khan Foundation involved in the restoration of Humayun's Tomb) and Satwant Rihal (Professor Emeritus of CalPoly).

Many detailed technical exchanges took place between sessions of the general assembly and symposium. Topics included a range of technical matters, case studies and emerging issues for conservation and management of cultural resources, including: lime plasters and mortars, raw and stabilized earth building, detailed case studies, masonry arches, vaults and domes, structural design and seismic resistance of unreinforced masonry, conflict resolution through hands-on/ practical training initiatives, participatory processes, professional education in conservation and masonry, and activities of the CRAterre/ UNESCO Chair Earthen Architecture network.

Thank you to the Auroville Project Coordination Group!

<http://icomosga2017.org/> ■





Aga Khan Foundation tour of Humanyun's Tomb Restoration with Prashant Banerjee

Certitude - SK Road Stabilization

In preparation for Auroville's 50th anniversary celebrations, L'Avenir, the town planning body of Auroville, asked Satprem and the Earth Institute team to assist with the stabilization of the dirt road from Certitude to Solar Kitchen. Previous efforts had been made to build a new *pukka* or permanent earth road using Poured Earth Concrete (PEC), but it was not possible in the short time frame.

Starting on the 8th January, Satprem and the AVEI team assisted the Road Service team to innovate a new method: Stabilized Earth Concrete (SEC). With such a short time table before the 50th, the road could not have been improved even with conventional methods.

This road – for various reasons – needs to remain “temporary,” and therefore a two-year lifespan was requested. Nonetheless, the Earth Institute intends for this road to much surpass this expected lifespan, while still fulfilling the needs expressed by L'Avenir.

The necessity to find an urgent solution has given rise to a whole new innovative potential for rapid road construction with stabilized earth. Further information on the research reporting for this initiative will follow in our next newsletters. ■



Road Service at work on the Stabilized Earth Concrete road, with assistance from Satprem, Ayyappan, and the rest of the Earth Institute team



Drone Video of Sharanam

Vimal Bjojraj of Auroville Consulting shot an absolutely stunning video of the construction of the 15 meter vault at Sharanam! Please check it out! Thank you so much for your beautiful work, Vimal!!

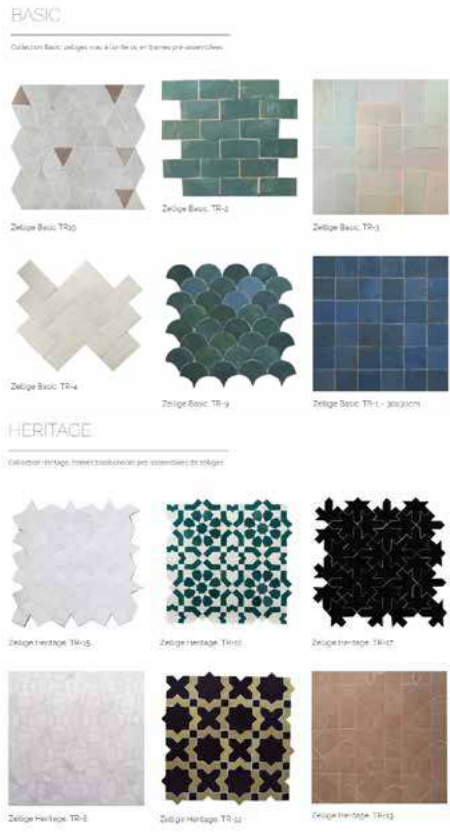
<http://bit.ly/2DVQCKF>

Delphine Laport of Zelij

In late January, we had a wonderful surprise visit from Delphine Laforte of Ateliers Zelij, a workshop specialized in the manufacture of handmade cement tiles, 'zelliges' and surfaces. Zelliges are a highly geometrically complex form of traditional Islamic mosaic. With workshops in France and Morocco and a Research & Development studio in Toulouse, their innovative design work

demonstrates a new approach to the timeless tradition of Moroccan tile. They work with over 100 Mâllems (master craftsmen) in their workshops. Much of production of zelliges centers in the area of Fez because of the particularities of the clay minerals in this region. Check out their beautiful work!

<http://www.zelij.com/>



Mohamed Ismail of MIT
 Mohamed Ismail from the MIT Tata Center for Technology + Design came to visit the Earth Institute briefly in January. Mohamed and Prof. Caitlin Mueller are in the early stages of research for their project "Low-cost, low-carbon structural components for housing in

India". This project aims to develop innovative new solutions for optimized structural components such as long-span beams and floor systems for reduced cost and environmental impact.

<https://tatacenter.mit.edu/portfolio/low-cost-low-carbon-structural-components-for-housing-in-india/>





The Earth Institute is building up to the 50th Anniversary festivities...

Rammed Earth Stele

The soil samples coming in from around the world will soon be used to build the commemorative rammed earth stele at Unity Pavilion, Auroville.

On 22nd February, the Earth Institute will conduct a small ceremony and pooja to inaugurate the construction of the stele. This will be held in conjunction with the opening ceremony for The Bridge Symposium which is also taking place at Unity Pavilion. Over the following week, everyone is invited to come take part in the

participatory ramming of this wall. If you are also contributing soil for the wall, please bring it to the Earth Institute a few days before, so that it can be documented and prepared for construction use.

More information will be following soon. Please feel free to contact us with any questions.



Some of the soil samples already collected

AVEI Open House

In honor of the 50th anniversary of the international township of Auroville at the end of February, the Earth Institute will be hosting an open house on its campus on 19th and 20th February. This two-day event will be open to the Auroville community and all visitors interested in learning more about earthen architecture and the Earth Institute's activities. Through dynamic demonstrations of the properties of soil, hands-on stations showcasing different earth-building techniques, photos of AVEI projects, and explanatory videos, we hope this open house will provide an inspiring experience for laymen as well as building experts!

We invite you all to visit the Earth Institute on:

Monday 19th or Tuesday 20th February
10am to 3pm

Please feel free to contact us for further details.

Starting the afternoon of Thursday 22nd February
In coordination with The Bridge

<http://thebridge.auroville.org/>

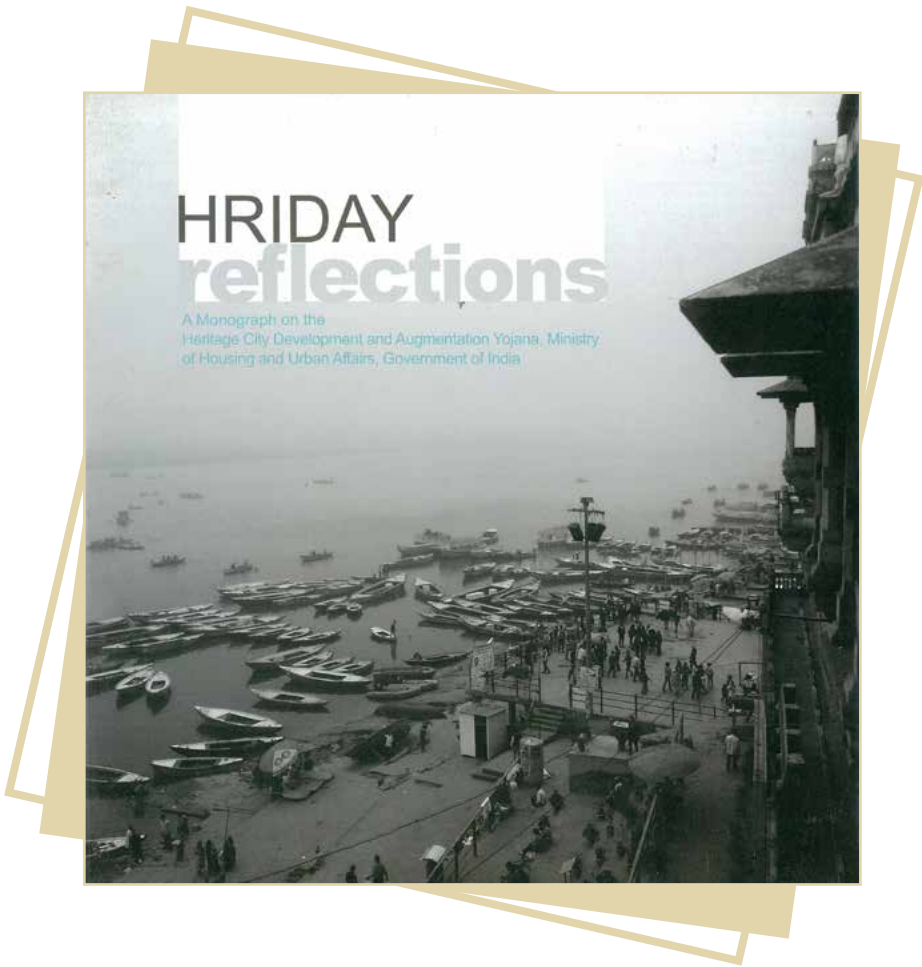


Ramming a wall within a formwork

Hilary's Book Corner

The Earth Institute's library gained a valuable addition from the ICOS conference, *HRIDAY Reflections: a monograph on the Heritage City Development and Augmentation Yojana, Ministry of Housing and Urban Affairs, Government of India*. This beautiful publication, edited by Jigna Desai, Gurmeet Rai, and Rutul Joshi, compiles essays from experts in the field of heritage conservation and urbanism, overviews of the City HRIDAY Plans with case studies, and critical analysis and reflection on the HRIDAY scheme.

The Heritage City Development and Augmentation Yojana, or HRIDAY, is a government scheme started in 2015 to holistically develop infrastructure in heritage cities – with an emphasis on livelihoods, skills, accessibility, and service delivery – to preserve and revitalize the unique character of each city. Incorporating many of



the key institutions already working in the field of heritage preservation and urban development, the program has expanded to 12 cities scattered all across India, possessing a diverse array of geo-

graphical, historical, and cultural characteristics.

This book collects a compelling selection of viewpoints on the field of urban heritage preservation, drawing far beyond the borders of the HRIDAY scheme itself, and highlights the important work already underway and how it can inform further development and expansion of the program. It is particularly precious given the lack of emphasis heritage preservation so often receives in the push for rapid development and modernity.

More information about HRIDAY can be found at:

<http://hridayindia.in/>



Cities that are already benefitting from the HRIDAY scheme

NEW Course Wind Generator Design

The Earth Institute will be offering a new course this year, the Wind Generator workshop, which will teach the basics of building a simple, low-cost 600W wind turbine with a 2.4m-diameter rotor. This course will be taught on 12th to 17th November by Ayyappan, who has extensively experimented with wind turbine construction with the help of Hugh Piggott's Wind Turbine Recipe Book.

Through hands-on sessions, this course will take students through all the steps required for the construction of a wind turbine, including woodworking and metalworking, winding the coils, casting the stator coil and rotor magnet disks, generator fabrication, and assembling and testing of the wind turbine.

We hope that this course will enable trainees to develop a holistic approach to building that combines sustainable building techniques with renewable energies.

Please see our website for more information about registration:

http://www.earth-auroville.com/training_dates_and_info_en.php

http://www.earth-auroville.com/wind_turbine_en.php ■



Ayyappan with early prototype wind generator

New Team Members

The Earth Institute has welcomed four new and returning team members!

Shobhit

Shobhit is a graduate of the Faculty of Architecture at Manipal University in Karnataka. After two internships in Bangalore, he was introduced to the Earth Institute after attending the Bioclimatic Earth workshop in October.

Ever since having read about the numerous benefits of building with earth, he has wanted to learn more about earthen construction techniques. In joining the Earth Institute team, he hopes to quantify the different parameters re-

lated to earthen construction in order to prove that earthen construction is in fact more climatically responsive than concrete. He also hopes to study and document the vernacular architecture in the Auroville bioregion.

Pragati

I'm Pragati, 4th year architecture student from JNEC College, Aurangabad, Maharashtra.

When I got to know about the work of AVEI, I was fascinated to see how Earth structures can be multi-storey, aesthetically pleasing and high in strength at same time.

After attending AVD course, I was strongly willing to learn techniques for constructing free span and multi-storey buildings, which brought me here to AVEI.

Dania

Dania is an architect from Jordan with an interest in artisanal crafts, manufacturing, and design. She has graduated from the German Jordanian University in Amman, and has acquired experience as an architect and designer, working in both Jordan and Germany.

Her interest in acquainting herself better with sustainable building techniques brought her to Auroville for the first time, as she took part in a number of training courses at the Auroville Earth Institute. Seeing value in the knowledge she acquired brought her back to Auroville as a volunteer.

She hopes to promote building with earth back in her region, where it is needed most, and where it has been greatly over-ridden by globalised building techniques and materials.

Richard

Richard Presley has returned to AVEI to continue his unofficial roles as Copy Writer/Editor, and Sr. Research & Development Associate.

In June 2013, after a 5-month residency, Richard had returned to the USA to attend family matters. He will be in residence at AVEI this year until June, and after a short hiatus plans to return to AVEI Fall '18 through winter '19. ■

Protecting Chaco Canyon

Please give your time for this petition to protect the invaluable cultural heritage of Chaco Canyon, and consider circulating it within your various networks where appropriate. Sadly it is only for US zip codes. :(

Petition: No drilling at Chaco Culture National Historical Park
https://act.credoaction.com/sign/no_chaco_drilling?sp_ref=381208533.4.185534.e.596529.2&referring_akid=26966.12615979.u9xKag&source=mailto_sp

The Treasures of Chaco Canyon Are Threatened by Drilling (NYTimes)
<https://www.nytimes.com/2017/12/01/opinion/chaco-canyon-new-mexico-drilling.html>

UNESCO World Heritage page
<http://whc.unesco.org/en/list/353>

Manifeste pour une frugalité heureuse

Architect and author Dominique Gauzin-Müller has joined with engineer Alain Bornarel and architect-urbanist Philippe Madec to issue an urgent call for a shift toward “eco-responsible” existence. Promoting building methods that draw upon traditional know-how and reduce the use of non-renewable resources, they ask for this spirit of frugality to touch every aspect of living. Please see their petition, in French, at the following link:

<https://www.frugalite.org/> ■

FRUGALITE.ORG

**MANIFESTE POUR
UNE FRUGALITÉ
HEUREUSE**

Contact Signez le manifeste



View of Pueblo Bonito at Chaco Canyon (© MARELBU)



50th Auroville anniversary

**HELP US
CONSTRUCT
UNITY
THROUGH
DIVERSITY**



Auroville
Earth Institute
UNESCO CHAIR EARTHEN ARCHITECTURE



THOUSANDS OF SOILS. ONE EARTH.
BRING US YOURS!
 FROM YOUR CORNER OF THE WORLD

On the occasion of Auroville's 50th anniversary in **FEBRUARY 2018** Auroville Earth Institute and Unity Pavilion will celebrate this special event with the construction of a **RAMMED EARTH WALL** composed of **SOILS** coming from all over the **WORLD**. Can you contribute ?

1) COLLECT 1 LITER OF SOIL

Dig below the organic topsoil with a tool to take your sample from the mineral-rich subsoil. The more you can provide, the better!

2) PREPARE YOUR SAMPLE

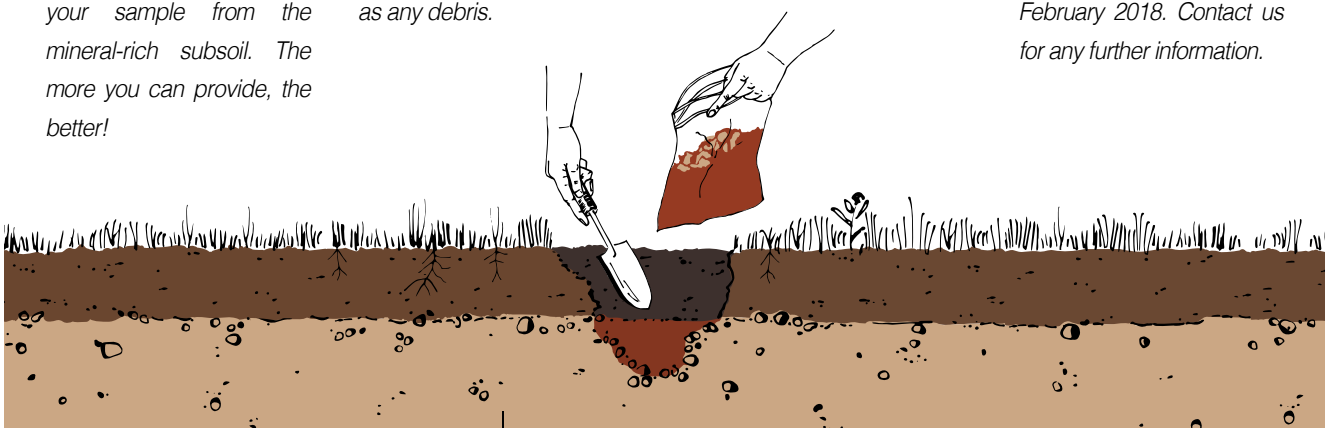
Remove any stones larger than 3 cm in diameter, as well as any debris.

3) STORE IT IN A ZIPLOC

Put it in a ziploc bag, labelled with the town/country of origin.

4) BRING IT OR SEND IT TO US

Hand-deliver or ship it to us anytime up until 20th February 2018. Contact us for any further information.



www.earth-auroville.com
communication@earth-auroville.com



Auroville
Earth Institute
 UNESCO CHAIR EARTHEN ARCHITECTURE

+91 (0) 413 262 3330
 Auroshilpam - 605101 Auroville, TN

**AVEI Training Course
Schedule for 2018**

March

12th to 17th: CSEB Design
19th to 24th: CSEB Production
26th to 31st: CSEB Masonry

April

2nd to 7th: AVD Intensive
16th to 30th: Bioclimatic Earth

June

4th to 9th: Ferrocement
11th to 16th: AVD Theory
18th to 23rd: AVD Masonry

July

2nd to 7th: CSEB Design
9th to 14th: CSEB Production
16th to 21st: CSEB Masonry
23rd to 6/08: Bioclimatic Earth

September

3rd to 8th: CSEB Production
10th to 15th: CSEB Masonry
17th to 22nd: AVD Theory
24th to 29th: AVD Masonry

October - November

8th to 13th: Ferrocement
22nd to 5/11: Bioclimatic Earth
12th to 17th: Wind Generator

December

3rd to 8th: CSEB Intensive
10th to 15th: AVD Intensive

AVEI Newsletter

Issue 37 - January 2018
© Auroville Earth Institute

Editorial Team:

Hilary D. Smith
Lara K. Davis

Auroville Earth Institute
Auroshilpam
Auroville 605 101 T.N.
India

Tel.: +91 (0) 413 - 262 3330
/ 262 3064

Fax: +91 (0) 413 - 262 2886

www.earth-auroville.com

info@earth-auroville.com
training@earth-auroville.com

Sharanam conference hall -- Conical vault with maximum span of 15 m, built by AVEI

MAY ALL THAT WE DO
SERVE BUT THE PURPOSE
TO LET THE LIGHT SHINE IN...

HAPPY HOLIDAYS &
WARM WISHES
FOR 2018!



FROM SATPREM, LARA & THE EARTH INSTITUTE TEAM