

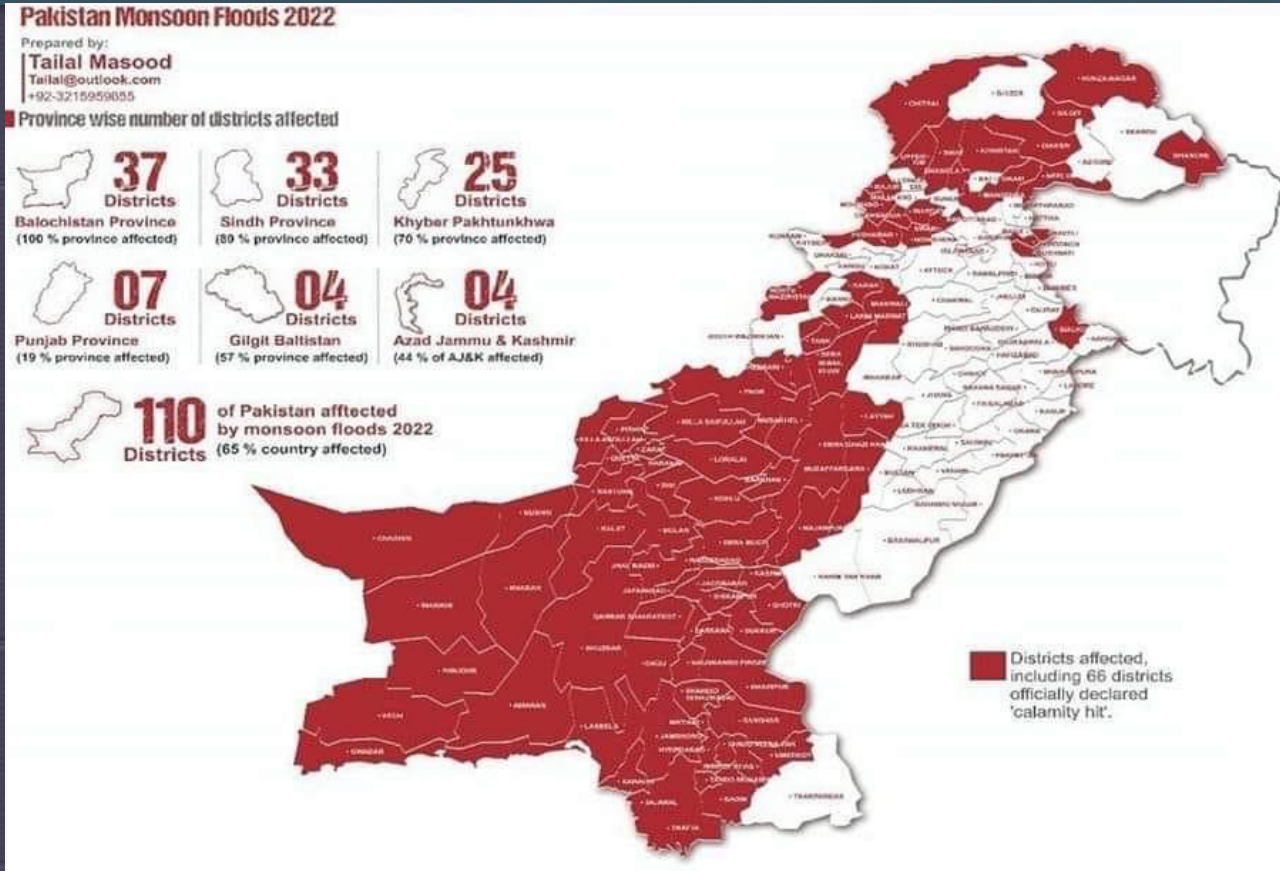
# CLIMATE VOLUNTEERS AT CAMBRIDGE



ALJAZEERA

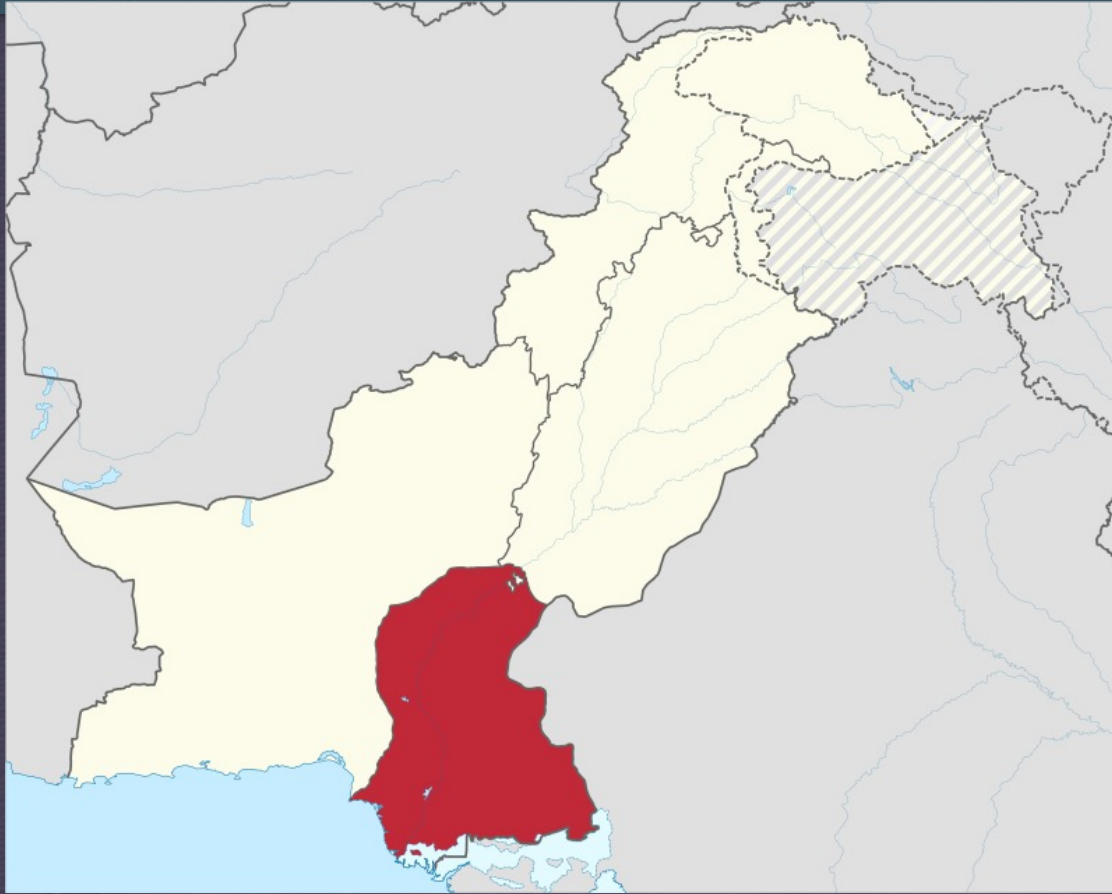
The Great Deluge, 2022

# FLOOD DISASTER 2022



*More than 1/3 of Pakistan, size of whole UK, submerged.*

# DISTRICT MIRPUR KHAS, SINDH



*Sindh province*



*Mirpur Khas District*



# SCHEDULE OF VISIT

*Day 1: Arrival in Karachi*

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*Day 2: Visit to Denso Hall Rahguzar, Karachi's first eco enclave  
Departure for Pono Village, Mirpur Khas 4 hour drive.*

*Day 3-9: Work in Pono Village*

*Day 10: Return to Karachi- Leave after lunch*

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*Day 11: Return flight*

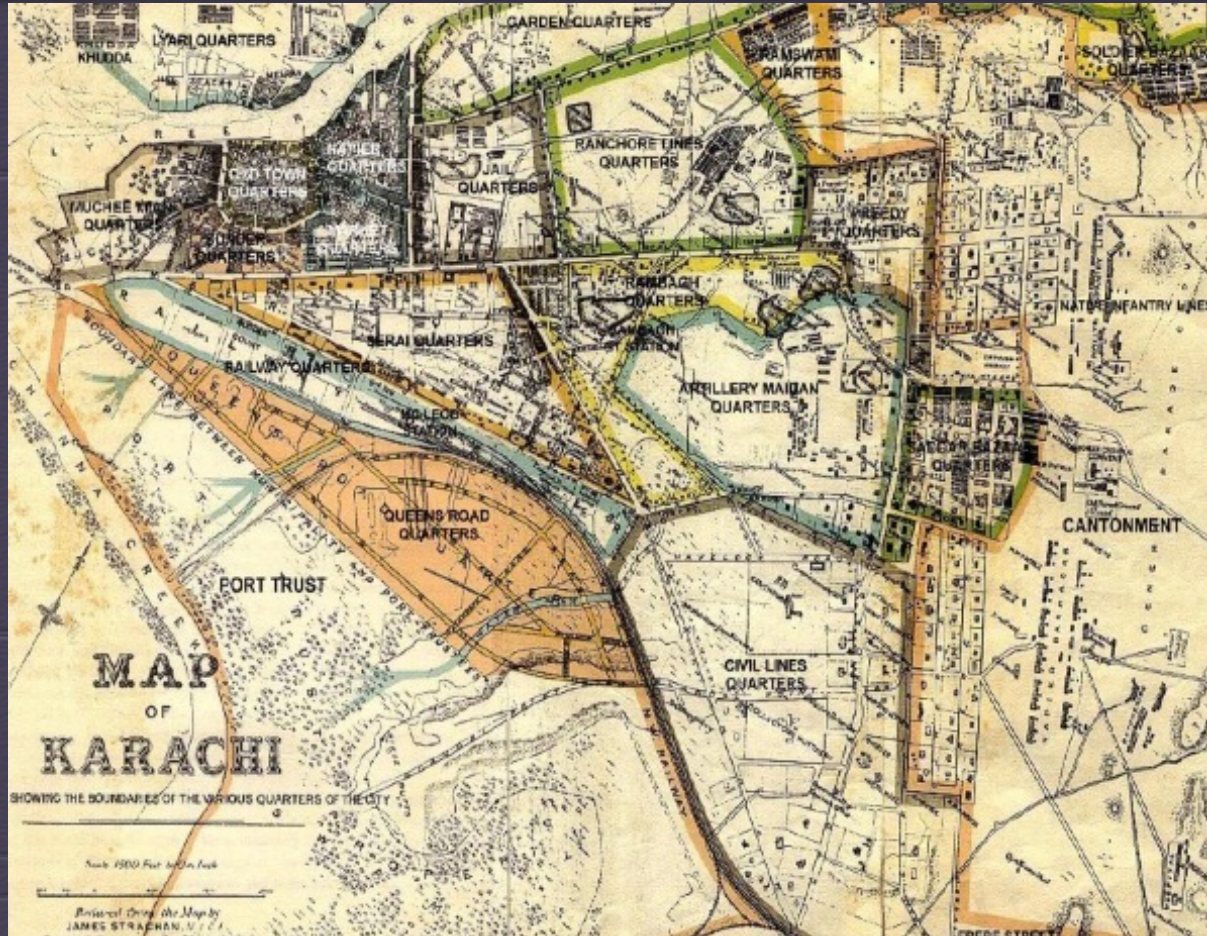


## DAY 1-2: KARACHI





# KARACHI'S HISTORIC CORE



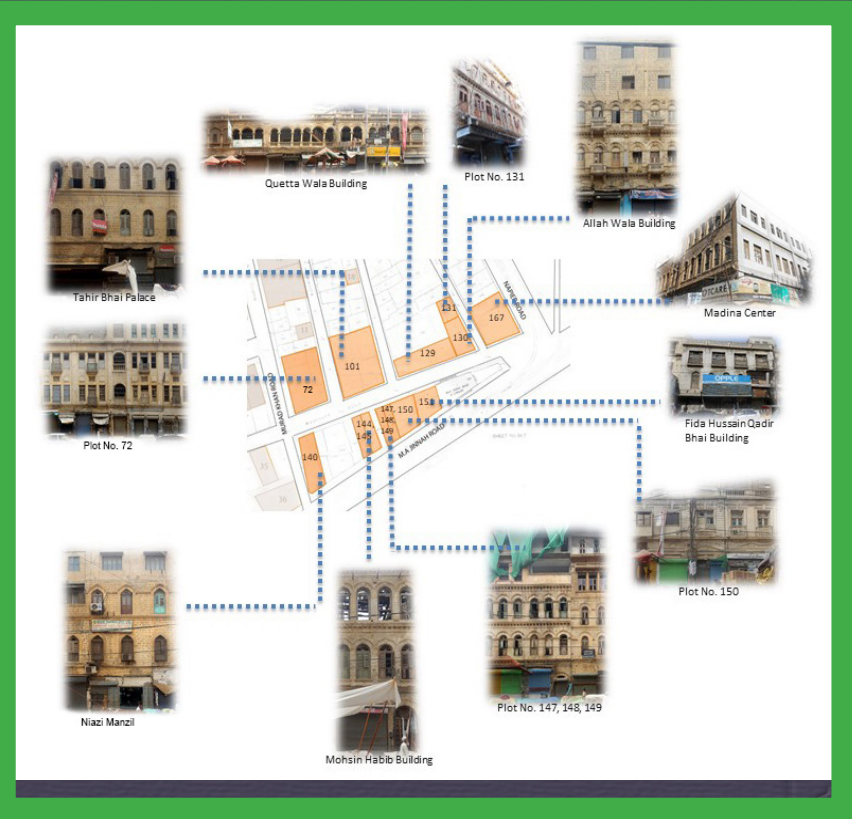


# DAY 2: HISTORIC CORE - NOTIFIED TRAIL





# DAY 2: DENSO HALL RAHGUZAR



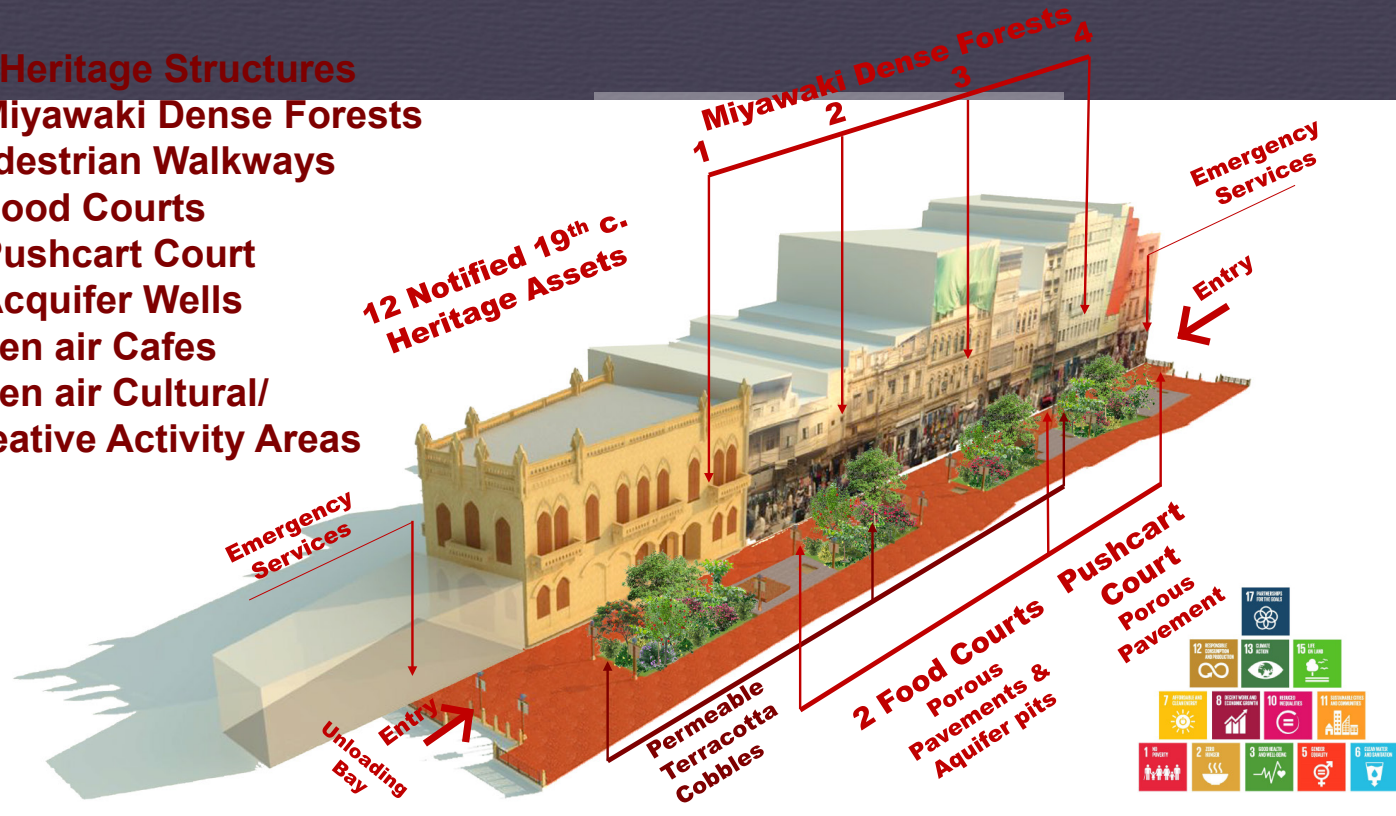
# DAY 2 – CONCEPT PLAN DENSO HALL RAHGUZAR ECO ENCLAVE





# DAY 2: - SECTION OF DENSO HALL RAHGUZAR ECO ENCLAVE

- 12 Heritage Structures
- 4 Miyawaki Dense Forests
- Pedestrian Walkways
- 2 Food Courts
- 1 Pushcart Court
- 7 Acquirer Wells
- Open air Cafes
- Open air Cultural/  
Creative Activity Areas





## DAY 2: - DENSO HALL RAHGUZAR BEFORE & AFTER



## DAY 2: - DENSO HALL RAHGUZAR BEFORE & AFTER





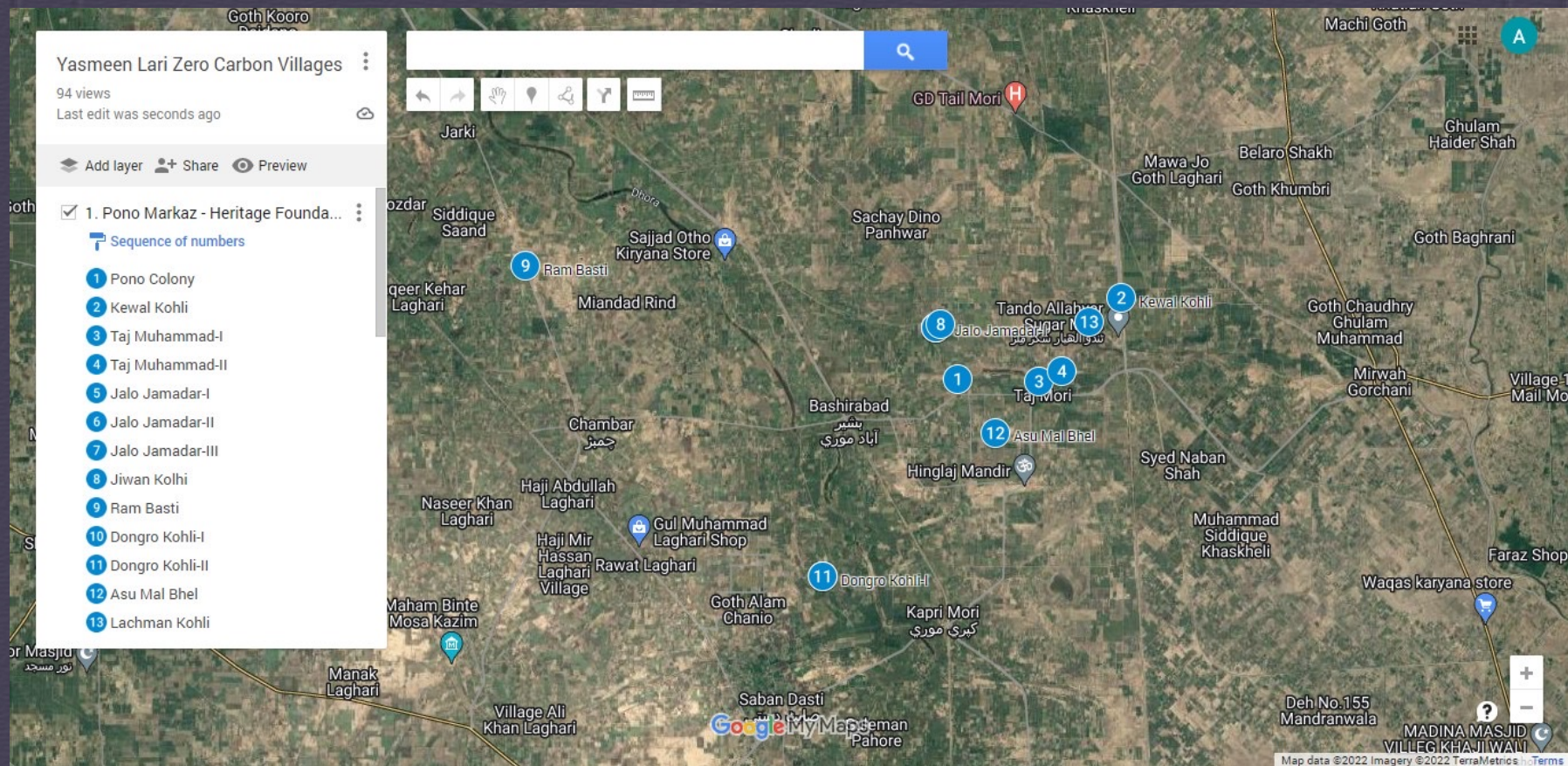
# ZERO CARBON VILLAGES

P



# ZERO CARBON VILLAGES ON GOOGLE

<https://bit.ly/YLZCVillages>





# VILLAGE PONO DRONE MAP 100 H/H





# VILLAGE PONO BEFORE AND DURING FLOODS





# VILLAGE PONO AFTER FLOODS



*Soup kitchens through mothers.*



*Rebuilding starts.*



# BAMBOO EMERGENCY LOG FOR 100 H/H



*1. Prefab Bamboo Skeleton erected in 2 hours.*



*2. Immediate enclosure with reed matting.*



*3. Personalized with earth plaster and decoration.*



# BAMBOO INSTANT SHELTER PROVIDED TO 1,000 H/H



*1. Bamboo frame erected and enclosed with matting in 3/4 hour.*



*2. Enclosure with self made reed matting.*



*3. Earth plaster for finishing.*

# ACCOMMODATION BEING BUILT FOR VOLUNTEERS



*Disaster resilient permanent LOGs*



# EMERGENCY LOG SHELTERS COMPLETED

HERITAGE FOUNDATION OF PAKISTAN INITIATIVE FOR FLOOD AFFECTED COMMUNITIES  
EMERGENCY LARI OCTAGREEN (LOG)SHELTERS  
ZERO CARBON CULTURAL CENTRE (ZC3), MAKLI & PONO COLONY, MIRPUR KHAS



15 OCTOBER 2022



Emergency LOG Shelters

Page 2 of 4

HERITAGE FOUNDATION OF PAKISTAN INITIATIVE FOR FLOOD AFFECTED COMMUNITIES  
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Page 3 of 4

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Emergency LOG Shelters

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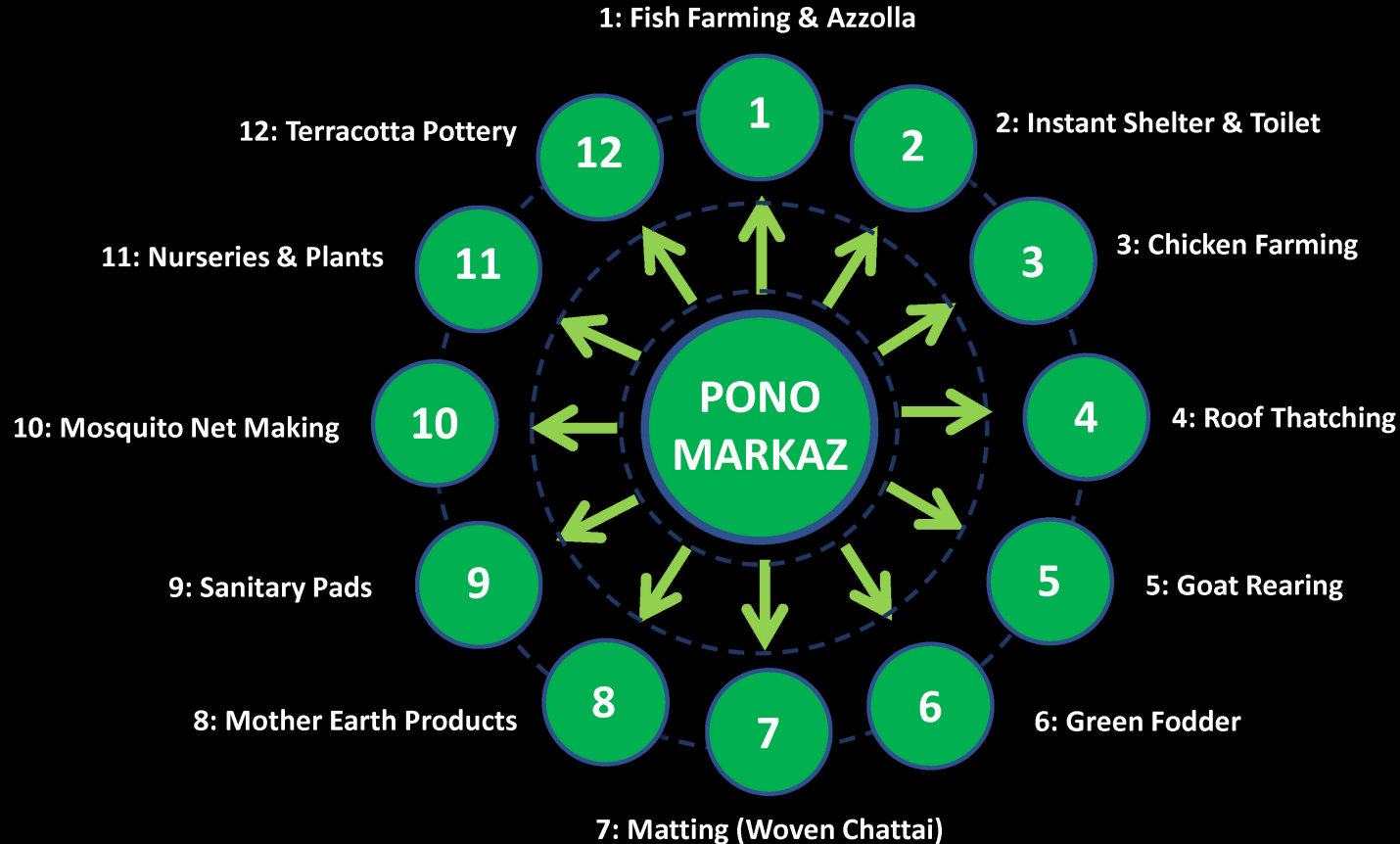
# COMMUNITY GET TOGETHER



*Learning to help each other.*



# ZERO CARBON VILLAGE CLUSTERS /1000 FAMILIES



# SPECIALIZED BAREFOOT ENTERPRISES

Pono Markaz or Centre:    *Hospitality village,*  
   *Trained workforce for training other villages*

*Village 1:    Fish farming and Azzolla growing*

*Village 2:    Bamboo Instant shelters and Instant eco-toilets fabrication*

*Village 3:    Chicken farming*

*Village 4:    Roof thatching*

*Village 5:    Goat breeding*

*Village 6:    Green fodder growing*

*Village 7:    Reed matting fabrication*

*Village 8:    Mother Earth products*

*Village 9:    stitching Village - Mosquito net making*

*Village 10:    Nursery and Vegetable*

*Village 11:    Rilli Village*

*Village 12:    Terracotta and potters products village*



# HANDS-ON WORK AT SITE

1. *Helping build a class room using LOG prefab bamboo panels.*
2. *Making earthen Pakistan Chulah stove*
3. *Learning to work with building materials*
  - *Dry lime slaking*
  - *Earth bricks/lime earth bricks*
  - *Earth lime masonry walls & renders*
  - *Earth lime flooring*
4. *Learning to work with bamboo.*

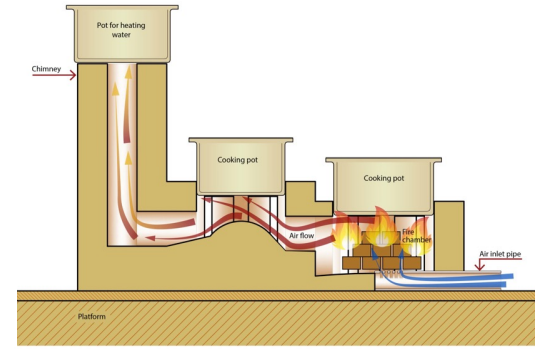
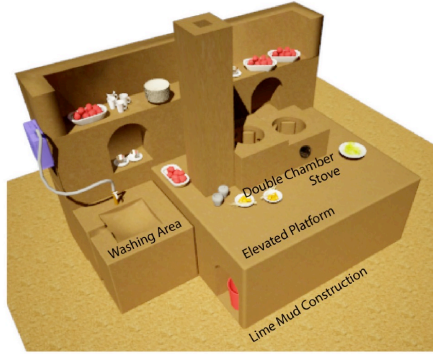
# BUILDING A ZERO CARBON BAMBOO/EARTH CLASSROOM



*Building Double Octa 18'x12'.*



# MAKING EARTHEN PAKISTAN CHULAH STOVE





# USE OF LOW CARBON MATERIALS



*Learning from local artisans.*



*Making sundried clay bricks.*



# USE OF LOW CARBON MATERIALS



*Working with bamboo*

# LEARNING BAREFOOT ENTERPRISES

1. *Reed Matting*
2. *Roof thatching*
3. *Pottery and terracotta products*
4. *Mother Earth products*
5. *Stitching patchwork rillis*
6. *Growing green fodder*
7. *Chicken & Goat farming*
8. *Vegetable farming*
9. *Community forests*



# BAREFOOT ENTERPRISES – MATERIALS FOR HOUSING



*Working with reeds.*



# BAREFOOT ENTERPRISES – POTTERS VILLAGE



*Moulding clay..*



# BAREFOOT ENTERPRISES – FOOD SECURITY



*Growing vegetables in raised beds.*



# BAREFOOT ENTERPRISES – FISH FARMING



*Using local ponds for fish farming*



# BAREFOOT ENTERPRISES – BREEDING CHICKENS



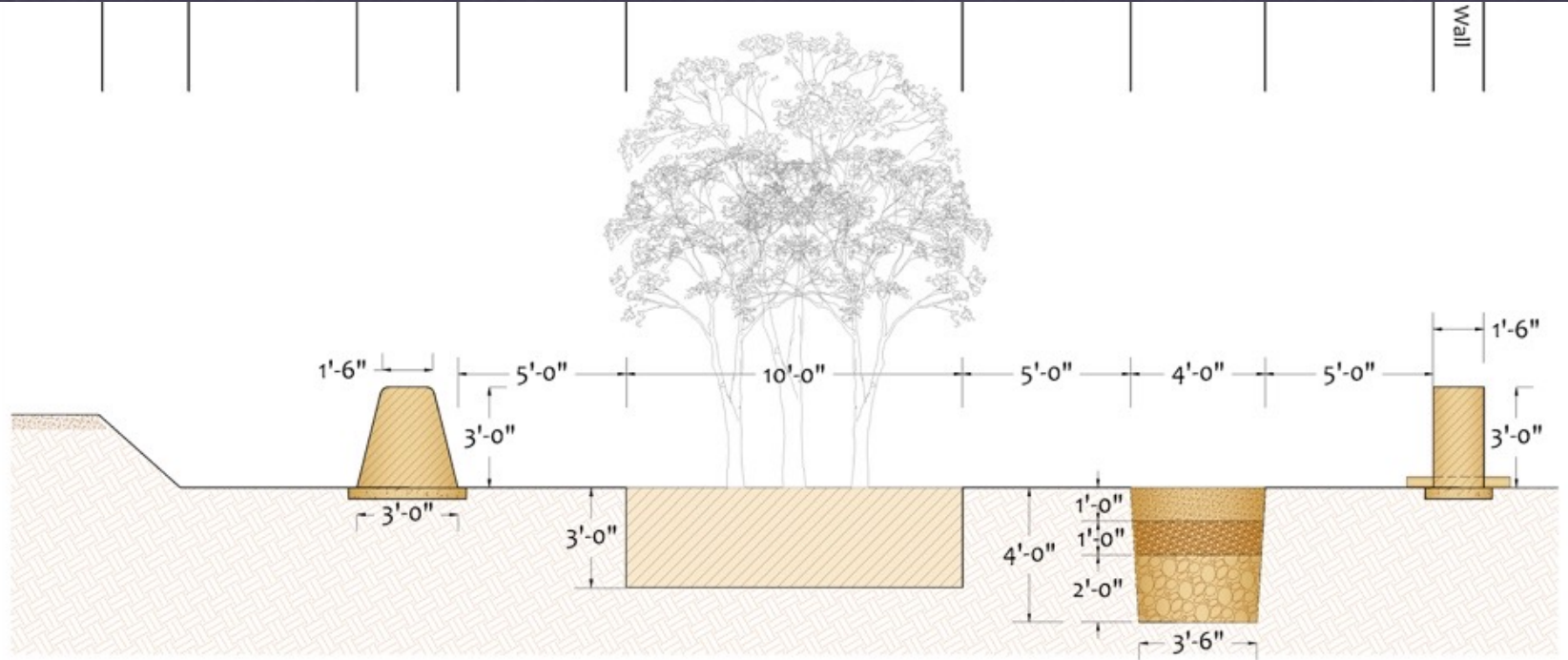
*Eggs for children's nutrition.*

# COMMUNITY DISASTER PREPAREDNESS


1. *Protective Measures - Plantation, boundary defence walls.*
2. *Maps for identifying water ingress*
3. *Design of low cost warninig systems*
4. *Perma culture principles for training of water routes and soil absorption capacity*
5. *Role of aquifer wells and aquifer pits*
6. *Establishing maintenance procedures for water courses*
7. *Keeping villages safe through community action.*



## Wall



## Flood Emergency Response

				Project: <b>Flood Emergency Response</b> Title: <b>Rain Water Pit</b>		 A HERITAGE FOUNDATION OF AMERICA		Month: <b>NTS</b> Day: <b>S</b> Letter: <b>L</b> Count: <b>(2)</b>	To: <b>Sep 22</b> Code: <b>001</b>
Notes	Revisions	Date	Sign						

# DISASTER PREPAREDNESS



*Growing saplings for community forests. building protective walls.*



# OPEN AIR DESIGN STUDIO

1. *Designing and fabricating bamboo and/or earth furniture*
2. *Design & build earthen art installations with youth and women*
3. *Designing art work - painting with organic colours*
4. *Use of patterns in architecture*

# SUSTAINABILITY ANALYSIS

*Considering normal construction is responsible for Comparison between high tech high impact construction with locally sourced construction materials.*

- 1. Impact on eco system through extraction of locally sourced materials*
- 2. Comparison of water usage and material waste stream with locally sourced materials.*
- 3. Identifying sources of erosion due to usage of such materials, damage to water ways or plant life.*
- 4. Level of air pollution compared to normal construction.*
- 5. Analyze energy efficiency of zero carbon buildings during construction and when in use.*
- 6. Check suitability for living considering location. siting, insulation value, and façade colours.*
- 7. Checking quantity of water used in fabrication and interior air quality.*
- 8. Check advantage of natural light, passive cooling to minimize energy use.*
- 9. Potential for alternative energy - solar, wind etc.*