HARNESSING RAINDROPS

Amaidhi homes

Shama Dalvi

SDA
Contents

• Introduction to project
• Types of Rainwater Harvesting Systems
• System used for Amaidhi
• Implementation details
• Conclusion
Amaidhi

- Located in Elagiri at an altitude of 1050 m
- Avg. annual rain fall 900mm
- 12 vacation homes on 2.5 acres of undivided land
Types of Rainwater harvesting systems

**Active system**
uses pipes, tanks and pumps to collect and reuse the water

**Passive system**
uses infiltration, replenishes aquifers with soil as a storage reservoir
Passive rain water harvesting for Amaidhi

Expected amount of rain water

- 1770 m³ from all the roofs
- 4030 m³ from road, paved areas, gardens & rock outcrops

Projected cost of active system

- 12 lakh = 150 m³ water
- Additional for erosion control

Projected cost of passive system

- 10 lakh = 3500 m³ water
- Would take into account all runoffs
Implementation – passive rain water harvesting

- Slow down runoff, provide retention, increase infiltration
Implementation details - Catchment

- Gutters & spouts
Implementation details - **Conveyance**

- swales
- storm water channels
Swales & Storm water channels

SWALES
- Shallow depressions in ground
- Planting filters water

STORM WATER CHANNELS
- Channels on road with concrete
- Directing water to the swales
Implementation details – Storage & infiltration

• totally 11 percolation ponds of varying sizes
RWH = catchment + conveyance + storage
Erosion around percolation ponds.
Erosion control around ponds
Conclusion

Salient points of a passive rain water harvesting system
• Cost effective
• Water purified by plants and microbes
• Groundwater is recharged
• Long-term solution to water management
The effectiveness of a rain water harvesting system lies in its ability to meet the site specifics and end use preferences ….

The passive RWH system at Amaidhi is done in collaboration with Dirk Nagelschmidt, Paul Blanchflower and Ketty Gopinath.
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