

Research Summary: Haiti Earthship project

Background information and descriptive research:

- Haiti was hit by a 7.0 earthquake on 12 January 2010.
- It is estimated that 300,000 people were killed and displacing 1.5 million people.
- 69% of the population lives below the poverty line (Worldbank).

Basic Research Community: Port-au-Prince, Haiti

- The epicenter of the earthquake was 25km away from Port-au-Prince and 230,000 people were killed (Haiti government).
- Population: 2.5 million people.
- Main activity: Export of coffee and sugar, tourism. Unemployment and crime rates are high.
- Local building methods and materials: Cement block homes with corrugated iron roofs without a building code (shanti towns).

Community Needs:

- Learn how to build low-cost earthquake resistant shelter using materials that are locally available.
- Reliable power and water sources with sanitary showers and toilets.

Applied research and project implementation/solutions:

Biotecture Planet Earth's hypothesis in this case is that by teaching how to rebuild a disaster hit region with self-sustainable building, safety will increase along with peace of mind and skills of the local population in times of natural disasters. Biotecture Planet Earth partnered with Earthship Biotecture to send an international crew of volunteers with the following objectives that have been met and completed:

- To construct an earthquake resistant self-sustainable building that takes care of its inhabitants and:
 - will provide strong, local, sustainable shelter.
 - has its own sanitary flush toilet.
 - features a shower with clean, sanitary water.
 - grows food.
 - can charge a cell phone and a laptop.
- To provide knowledge transfer to members of the local community to apply these building methods to their own construction methods and replicate this type of self-sustainable building (Earthship).
- To create an example for other communities to follow.

Findings and post-project:

- 20 local Haitians helped and learned how to build an earthquake resistant and hurricane resistant building made from garbage all sourced within a mile from the build site (structure).
- In a second hit, power and water systems were added to this building, again with the help of the locals.
- The project increased the quality of life, morale and skills of the Haitian people who were living in the UN tent camps.
- The team of volunteers found out what they need and also found out that they were able to help the locals to provide it for themselves.
- This project was very low-cost, \$7,000 was enough for travel expenses, local accommodations, food, shots, feeding the Haitian build crew and buying materials.
- An important increase of a community's quality of life and peace of mind can be achieved through implementation of a project and constructing a self-sustainable building.
- Biotecture Planet Earth continues to support the projects in Haiti. Currently a community theatre with two bathrooms and toilets is being built by local Haitians.