



PERMACULTURE & DISASTER RELIEF

Overview of Permaculture in Disaster Relief

- Permaculture is an adaptable and ever evolving tool kit that can be of vital assistance in disaster relief and the long recovery period to follow
- Permaculture seeks harmonious integration of landscape and people to provide food, shelter, energy and other material or non-material needs in a sustainable way
- 'Disaster Relief' refers to the process of responding to a catastrophic situation, providing humanitarian aid to persons and communities who have suffered from disaster
- Permaculture aid focuses on teaching people rather than doing the work themselves – this enables the community to be able to implement more sustainable systems once the permaculture practitioners have left
- Training, practical programs and tools are offered to assist communities in need
- Permaculture is suited for both the immediate disaster response, as well as longer-term solutions
- Utilising the ethics of permaculture, practitioners may prioritise:
 - Save lives first and property last
 - Make comprehensive plans with the local community
 - Design to reduce the extent and impact of disasters
 - Design to endure or avoid the worst of the disaster
- The key goal is to save lives by getting low tech, sustainable solutions into the field rapidly and create self-sufficient communities



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What is being implemented (objectives)?

Design, planning and preparation are the key to survival

Design aims are:

- Design landscapes and buildings which can withstand or survive the disaster at its worst
- Prepare for several types of catastrophes
- Analyze the cause, frequency and duration of the disaster
- Find out the frequency and impact of disasters
- Apply the permaculture design methods that relate to that disaster 'zone', to reduce the risk of natural disaster from happening eg. fire, flood, landslides, droughts etc
- Practice the precautionary principle, which states that if it is likely to happen it almost certainly will, so fix it or provide for that emergency now

Permaculture implementations vary depending on the type of disaster and environmental factors, but generally permaculture disaster relief focuses on:

Clean water and good sanitation

- Target the most important areas in the camps (e.g. hospitals)
- Show people how to filter water
- Set up disposal system/recycling system
- Build compost toilets, latrines and/or arbor loos
- Set up shower systems

Restoration of vegetation/plant life and farming systems

- Create systems that are *sustainable*
- These systems can incorporate economic solutions, which ensure that forests remain planted and are beneficial for the people
- Incorporate organic farming, which creates food security
- Teach and create easy to build houses from appropriate local materials (often bamboo)

Education

- Reaching out and educating as many people as possible in affected communities is vital
- Communities are taught how to design, and then create their villages, while working with natural systems
- Communities are also educated on health, diet and sanitation
- Permaculture practitioners reach out to NGOs linked to the disaster to teach permaculture design and sustainable methods of living
 - This enables permaculture to reach a much larger scale



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Benefits

- Communities become stronger through everyone being involved in the rehabilitation of their community
- Projects build partnerships between locals, NGOs and the government
- Sustainable management to ecosystems will decrease frequency/intensity of future hazards (floods, droughts, storms, illness, earthquakes)
- Provides people with an alternate and reliable source of income
- The increase in soil fertility positively affects home-scale production, which enables household food security to rise
- Better health through nutrition improvement, cleaner water and air
- Development of local expertise in a range of skills and techniques that are beneficial to the community

Challenges

- Each disaster is different – no one formula on what to do – so each disaster brings new challenges for permaculture
- Disasters can scale from 'small' to devastating, which can make gaining access to the disaster zones difficult
- Resources can be non-existent in addition to the lack of medicine for the number of people injured, sick or have infections
- Communication links and supply lines are often disrupted or destroyed
- With big international aid efforts, often no one is in charge, which can cause chaos and confusion for those permaculture practitioners who are helping
- Incorporating local culture into the programs to ensure that people will continue to engage, can be challenging and problematic
- PC's are dependent on stakeholder buy-ins – without the eventual handover to communities dedicated to continuing PC land management, projects will have little impact



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Basic Disaster Checklist

Modify and add anything else which is important to your situation and take into account various scenarios

- Escape plan: this accounts for everyone and priorities who goes first
- Water: you must ensure supplies of enough clean water to last the predicted duration of the disaster
- Food: you will require enough dry food and staples to last the duration of the disaster
- Medical care: you will need a first-aid kit and trained people
- Clothes: remember to plan for wet or cold weather
- Shelter and tools: a tarpaulin, blankets, rope, tools, spades and axes are all essentials
- Lighting and heating: ensure you have alternative sources of light and heat, such as candles and lighter or matches, torch, kerosene, lamps, gas and solar panels
- Communications: include a back-up such as solar radio or phone
- Waste disposal: plan how to dispose of human manure safely
- Money: keep some hidden in a waterproof packet
- Documents: ensure the safety of any papers that identify you or are personally valuable

Case study: Haiti

- Six PC experts went to Port-au-Prince shortly after the earthquake in 2009
- They determined the major threats to life were water and sanitation
- Immediate response included outreach and education on water filtration and treatment, management of sanitation and clean-up of the main hospital
- Creation + education of compost toilets, collaborating with US Army on well inspection and UNICEF assessing sanitation needs for orphanages
- Recycling systems were created, a compost toilet system for the camp was constructed, and “training of trainers” workshops delivered to national NGOs on food cultivation and handling of waste
- Connections were made with government officials, including a visit from Minister of the Environment of SE Haiti
- SOIL arrived in Haiti, contributing to two major issues: lack of sanitation and diminishing crop yields due to degraded soils
- Feedback from rescue workers was that their skill sets were very valuable and they would welcome permaculture practitioners + low tech, sustainable solutions ant any disaster site

READ MORE

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More permaculture projects from around the world

- Common Ground Relief
- Agroforestry Program in Langui Refugee Camp, Northern Cameroon
- Habitat for Humanity
- Global Ecovillage Network GEN
- ROMA Foundation
- Permaculture Worldwide Network
- ACTED
- Sustainable Organic Integrated Livelihoods
- GreenHand Field School, Bali
- Himalayan Permaculture Association