

resilience now

sustainable solutions for vulnerable communities
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PERMACULTURE AND AID DELIVERY, A RECIPE FOR RESILIENCE

Permaculture is a methodology which aims at developing community resilience through good environmental management and which may be useful to humanitarian practitioners.

Permaculture, an acronym for Permanent Culture, is a gathering of knowledge and practices from around the world including: traditional practices from traditional farming systems, modern techniques for energy production, the patterns found in nature for ecosystem resilience. It collects solutions for all aspects of human living: the production of food and energy, the management of water and waste, the conception of shelter. It has a strong general methodology which is applicable anywhere, and a collection of practices and low tech solutions easily mobilized and which can suit each context.

Permaculture proceeds from the observation of existing conditions to design a one-fit system which maximizes the potential of a particular site whilst also addressing any problems associated with it. Thus, analysis of the natural environment is crucial. Environmental sustainability is sought as it provides for the satisfaction of needs, whether for food, water, energy, shelter, livelihoods. It is a condition for the viability of the system and the resilience of the community.

Humanitarian aid agencies can benefit from the huge amount of knowledge in methods and techniques gathered by permaculture. Examples of application of permaculture in aid delivery include: the sectoring and zoning method for efficient energy planning and the “an important function is supported by several elements” principle. Examples of application for permaculture in recovery programs include: plant data base sharing, forest gardening, food conservation, passive housing, grey-water management, cultivable soil building.

What are the problems of actual practices:



- The **focus is on short-term support** to assist distressed populations. There is still little attention given to building long term food security and community sustainability.
- The urgency of providing aid often drives agencies to **build structurally unsustainable systems**. Even when circumstances allow the design and implementation of long-term programs for development, these programs often fail to address the issue of ecological sustainability.

Now, what do we need?

- To build **long term food security** and community sustainability. Durable crisis requires durable solutions. Instead of building back the same system, we should be ambitious and try to solve structural problems such as lack of food security, lack of access to water and sanitation, etc.
- To **improve disaster risk reduction** and preparedness so that the crisis doesn't happen again. This is achieved through resilience building.
- To adapt to a crisis prone world and prepare for future **challenges resulting from** resources depletion, **climate change**, the end of affordable and abundant oil, international trade volatility and demographic dynamics.
- To **empower communities** with solutions they handle.



These are the **goals of permaculture**, a field of expertise that aims at improving community resilience by seeking environmental sustainability, and which is starting to be implemented in relief and reconstruction contexts such as Haiti and Afghanistan.

What is permaculture?

A reading grid, a methodology and a set of tools to design systems that provide for food, water, shelter, energy, waste management, etc. in a sustainable and resilient way.

The word is a contraction of PERMANent CULTure.

The methodology has been set up in the seventies by Australian people and helps you design sustainable and resilient human settlements. It is transposable anywhere.

As for the set of tools, they are practices and low tech solutions from around the world and epochs. They have to suit each context.

It's mainly common sense and you don't have to say you do permaculture whenever you design a sustainable system. But knowing this name helps you get access to a huge collection of practices and tools and to its practioners.



Examples of methodological principles

There are many principles; a few examples will help catch the idea.

Principles that help the system be efficient

Each element performs multiple functions. *Example:* A pond is used for water storage, fish raising, microclimate regulation, light reflection to warm crops.

Catch and store energy and materials. Whenever they are at peak abundance, so that they can be used in times of need. *Example:* Rainwater collection.

Produce no waste. To value and use all the resources available. Also to try use the outputs of one element as the input of another. *Example:* to compost organic matters so you turn a waste into a fertilizer.



Principles that help the system be resilient

Use and value diversity. Diversity reduces vulnerability to a variety of threats. *Example:* Raising different varieties of the same crop.

Each important function is supported by multiple elements. Redundancy protects when one or more elements fail. *Example:* In a dry place, to combine well water with rainwater harvesting with dry farming techniques or heavy mulching.

Use and value biological and renewable resources. They reproduce, build up over time, store energy and assist yield. They also save human labor. *Example:* Chicken tractors: a cage on wheels that allows hens to go about their natural business on a specific piece of land. They free soil of weeds, fertilize it with their poop and clear any soil-borne pests.



What potential do sustainable practices have for relief work?

The main difference with traditional emergency aid is in meeting both immediate and long term needs.

To do so, you use systems that can sustain themselves beyond the recovery period.

Efficiency. It makes the most of what is locally available. Also because the holistic approach avoids eventual counter-productivity among separate problems resolution.

Durability. Projects are designed and built with the communities that will use them and keep them running.

Community empowerment. Integrating local people's skills together with local resources increases community members' sense of self-reliance. The hands-on approach also has psychological benefits: amidst devastation, it provides people with an opportunity to be actively engaged with something positive and meaningful.

Linking Relief, Rehabilitation and Development. The designs put the elements of long-term sustainability there from the beginning. They assist more rapid recovery. Crises can be transformed into opportunities for reconfiguring local systems in a way that builds productivity, efficiency and resilience.

Disaster Risk Reduction. Resilience helps to withstand disaster.

Permaculture, a recipe for resilience

Resilience may be defined as the capacity of a system to absorb and recover from shocks. Applied to human communities, it is the ability to avoid and recover quickly from a crisis, be it environmental, economical or social. Resilience is an indispensable constituent of community living.

It is now crucial to seek resilience in aid programs, be it in crisis or post-crisis context, because in the near future, challenges for human communities will increase as a result of changing climatic and demographic dynamics. Adopting a resilience approach in a humanitarian response has also potential benefits as it can improve disaster mitigation, contributes to more positive outcomes of humanitarian response and improves disaster risk reduction by emphasizing local solutions, sustainability and environmental sensitivity, in both rural and urban environments.



To achieve Resilience, we propose the use of methods and techniques derived from permaculture, a field of expertise that aims precisely at improving the resilience of communities by taking a holistic approach to the development of livelihoods systems. This method is now being tested in crisis situation such as Haiti and Afghanistan by small groups of permaculture workers who are not experts in the delivery of humanitarian aid. While their efforts are just beginning, we believe that the humanitarian community can learn a great deal from permaculture generally and from these early experiments in particular.
