

The basis of this article is as an Introduction to Permaculture for those attendees of the Financial Permaculture Workshop who are new to this Design System.

An Introduction to Permaculture: Tools for Self-Reliant Living

Cascadia Permaculture Jude Hobbs www.cascadiapermaculture.com January 2013

There are many mysteries in the world and, to some, Permaculture is one. But in truth it is a word that describes a very old way of being. In the years before the throw away society people recycled many goods. Clothes were carefully taken apart and remade into other garments, or became patches for quilts. Appliances were repaired instead of thrown away. People purchased goods from their neighbors. Within our lifetime, a change has come over the country, and the world. It became politically unpopular to save and reuse. Debt became almost fashionable, until we began experiencing the harmful results. These consuming attitudes cost our planet and us dearly. Some of us are finally ready to make a change. The study and application of sustainable systems is the way.

Permaculture (**permanent culture**) is such a system. As a design strategy, Permaculture directly influences efficiency and versatility in most aspects of life, from the garden to reforestation to responsible investing. Permaculture evolved through the hard work and experimentation of Australians, Bill Mollison and David Holmgren, beginning in 1972. The underlying theme is to create human designed and maintained ecosystems that are agriculturally productive and yet have the sustainability, diversity, and resilience of natural systems. It takes into account the full circle of life. Through the integration of the land, water, people, plants, animals, shelter, technologies and community, productive and beautiful environments will evolve.

By 1981, the concept of Permaculture (Pc) matured sufficiently to be taught as an applied design system. In this time of declining resources, whether it is oil, water or wood, Permaculture offers practical guidelines and positive techniques for incorporating sustainability into all aspects of ones' life...from water harvesting, to gardening, to supporting local businesses. Whether you live on large acreage or a city lot, through creative design one's property can be planned to maximize efficiency and productivity.

For ease of implementing Permaculture there are a set of principles and elements that offer strategies to guide one to make value based decisions. The ethical foundation of Permaculture rests upon care for the earth, care for each other and distributing surplus goods, such as food, knowledge and time.

Some examples of principles are: Permaculture turns problems into solutions, constraints into resources, and includes as many functions as possible in every element of the design.

Permaculture techniques can applied on your site in diverse ways. By reading the land, observing and recording what is existing (site analysis) and what you want to include (needs assessment) you can start to prioritize what to do where and when. The design process is often overwhelming. The first step is very simple---observing through the four seasons. Notice climatic conditions--rain, sun, wind, and frost patterns. During torrential rains how does the water flow on the land? What is the potential for swales, ponds or roof catchment systems? Is

the sun beating down on your house all summer? The planting of deciduous trees on the southwest side will block the summer sun and allow light for winter. Do you notice strong winds that impede plant growth or add to chilly house temperatures? Windbreaks can funnel air up and outward. These hedgerows or windbreaks are another way to create a diverse multifunctional design by planting trees, shrubs, ground covers, vines and/or herbs. Planting strips along property lines, between fields, and/or along riparian zones can conserve water, lessen erosion, provide additional income, and furnish habitat for beneficial insects and wildlife. Once you are very familiar with your site you can sort out challenges and turn them into solutions and implement accordingly, as time and money allows.

Since water is quickly becoming one of our most precious resources an important principle is holding water on the land for as long as possible. Soil and trees are wonderful sponges for holding water on the land, as are rain catchments: ponds, water tanks and barrels. For example, one of my favorite ways to store rainwater, which is intercepted off my roof, is in wine barrels. Since we live in wine country, oak barrels come available when they become 'oaky' and are no longer useful to wineries. From off our house roof gutter, I direct the downspout into the barrel, put a tap on the side close to the bottom and an overflow on the side top. Water is easily accessible for use and when the barrel is full the overflow goes into a pond or the storm water system. Many cities are now changing their policies for rain run-off and are researching water collection through swales (shallow ditches), ponds, and wetland filtration systems (biofilters). They are supporting the use of rain catchment to use for irrigation and to lessen the cost of storm water disposal, and are even offering credit for storm water mitigation. Ponds are multi-functional resources that can provide irrigation, water for animals, aquatic crops, fire control, light reflection, livestock barriers, habitat for waterfowl, and a place for quiet reflection. Keeping sustainability in mind, incorporating as many functions for a single element (the pond) is the key to successful design.

Within a Permaculture system, relative location is essential for efficiency and is defined in terms of Zones (1 to 5). It seems there is never enough time to do everything that needs to get done. If we locate the most often visited areas closest to the house (Zone 1) then we will walk fewer steps and save more time. You might consider an attached greenhouse on the south side of your home with vines (Kiwis or grapes) covering it to offer summer shade. Whether you live in the country or an urban setting providing some edibles by the house saves time and can provide year round food and beauty. For instance, if you are planning on having salad for dinner and also need some culinary herbs to season the soup--how about planting the salad and herb garden near your kitchen door? The kitchen garden is considered an element. Within this element, design in as many functions as possible. In the herb garden you might wish to have some chives, parsley, coriander, oregano, thyme, and/or other edible plants that also attract beneficial insects. You could also include fragrant and edible flowers, a bench for resting and/or a birdbath on an old tree stump with a recycled glass bowl on top. Here are a few other examples of edible landscaping near our house. There is a fig tree in a protected spot in amongst some larger trees; at the base are perennial flowers and herbs. The blueberries, with strawberries below, are planted along the edge of the vegetable garden and are a transition into another perennial flower and herb garden. In this area is a thriving 'Frost' peach and an 'Italian Prune'

plum tree. I have found in my partly shaded large yard blueberries, thimbleberries, lingonberries, strawberries, honeyberry, apples, rhododendrons, sword ferns, and hardy fuchsias all grow well. Mini-dwarf fruit trees are tucked in throughout the yard as are many bird attracting plants.

As we go further from the house into Zone II this is where a larger vegetable garden is located, as are the small domestic animals, some more dwarf fruit trees, out buildings, and a small pond. The other day I walked around a friend's garden where he built a small green house using recycled wood and metal for the main structure and insulated it with straw from the neighbor's field. To maintain heat he included large black 55-gallon drums filled with water on the north wall. This structure kept his chili pepper collection frost-free all winter. In our Maritime climate we can grow food all year round in the right conditions.

The concept of a calorie in and a calorie out will assist you in seeing the potential for Permaculture designs. For example, to maintain our body weight, we must eat just as much food as our body can utilize; similarly we look for ways in our Permaculture designs to achieve a balance of energy in and out so that we are conserving our resources. Including animals as part of the Permaculture design is one way to import less from the outside. For instance, having a few rabbits provides manure for a small city lot. They are very quiet and easy to care for. Placing them near the compost pile and garden is time saving planning. The manure helps the compost break down and the greens from the garden is supplemental feed for the rabbits. Some other sustainable practices for saving energy and closing the loops, are using leaves and other plant debris for mulch and compost, trees for fuel and building, planting nitrogen fixing cover crops and plants, utilizing chickens for scratching, fertilizing and digging up the ground for insects and roots, and including Indian Runner ducks who are voracious slug eaters. Well thought out management in the beginning stages will yield as a long-term investment.

Zone III is the place for the commercial farm crops, forage foods, larger orchard area, nursery plants, and windbreaks. In Zone IV is the forest and pasture areas managed for wild crafting and fuel needs. Zone V is the uncultivated wild sanctuary area. Woven into each zone could be plants for wildlife attracting, soil conditioning, windbreaks and water storage. There are often overlaps within each zone.

The area between one microclimate and another is defined as an edge. It is a well-utilized principle in Permaculture that encourages diversity and stability. If one thinks about what grows at a forest edge or along a stream we observe a wide diversity of insect, animal and plant life.

Permaculture not only considers the land but also the house. If you are building a structure consider solar orientation, using recycled materials or constructing with local material such as straw bales. Is your existing house well insulated? Are appropriate technologies (i.e.: solar, wood stove) part of your operational systems? Are you using environmentally safe products? Do you precycle/recycle? Do you buy bulk foods and support your local organic farmers through Community Supported Agriculture or farmers markets? Think of the many other ways to lessen the miles traveled for your particular consumer needs.

Permaculture is a broad design system that goes far beyond the boundaries of one's home. For those of you who live in sub/urban areas here are a few more Permaculture strategies. Encourage the planting of fruit and nut trees in city parks and general tree planting wherever possible. Also, community gardens, bicycle paths, mass transit, and the decentralization of shopping centers are important in urban development. Become involved with city planning and encourage new housing to face south, be less vehicle centric, and include appropriate technologies.

Supporting local businesses helps our economy, and limits the quantity of goods imported from farther away, saving the resources used to bring these supplies to us. An added benefit is that we begin to know the people in our community better, making it a safer and more intimate place to live. Also utilizing local financial institutions that invest locally and in a socially responsible manner, is an effective way to support local projects that benefit the community.

As a worldwide grassroots movement, the goal of Permaculture is to design small-scale energy efficient rural and urban homesteads that generate personal and community empowerment. Every Permaculture site is as unique as its' designers. There is a wide range of styles and techniques that can be utilized in every environmental condition and within any culture.

Hopefully, the mystery of this Whole System way of designing has been resolved and you can identify many exciting ways to utilize these ideas for creating your own path toward self-reliance.

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