Permaculture in One Page

Permaculture is a design science that uses applied ecology to meet our needs while healing our planet. Rather than solve problems one by one, we design robust overall environments. Instead of going "back to the land," we bring efficient natural landscapes back to where we live and work.

Ethics

Earth care: Use land in ways that benefit rather than harm the local ecology and the global climate.

People care: Meet needs (shelter, water, food, fiber, energy) locally with minimal waste. Help others do the same.

Fair Share: Sharing is the natural basis of wealth, so don't own a lot of stuff and prevent other people and species from using it. Instead, use your surpluses to help people and repair the land.

Pattern Understanding

Observe and use natural forms and flows, such as the 5-9 order of scale found in branching rivers, veins, forests and trees. Bigger units or branches are slower and fewer. Don't exceed natural scales.

Maximize Edge, hence productivity, by using wavy instead of straight boundaries. *Herb spirals* and *keyhole gardens* use spirals and lobes for greatest access with least path area.

Design Sequence

Site Selection: check for safety from floods, wildfire, other major disasters; watershed size & quality; water access and storage potential; modest sun-facing slopes.

Water: start at the lowest point on the highest property boundary. Link *swales* (contour trenches) to ponds. Swales buffer floods and droughts, grow trees, and recharge groundwater. Ponds may provide hydropower.

Access: Minimize hard surface. Build roads or paths on ridge lines or above and parallel to swales to catch water.

Sectors: Identify the directional flows of energy (sunlight, wind, noise...) and build or plant to use or divert them, depending on climate and season.

Zones: Build and plant in zones by size and intensity of use. 1=home, intensive garden; 2=main crop, orchard, hedge; 3=broadacre crop, pasture, pond, food forest; 4=farm forestry; 5 = wilderness.

Structures: Bring areas that interact frequently closer together (e.g., gardens near kitchens). Analyze needs and *stack functions*: meet 3+ needs with each earthwork or structure. Meet every need 3+ ways.

Planting: in *guilds* (groups of organisms that help each other) and *succession* (pioneer plants prepare the soil for later generations). Reforest ridge tops and slopes > 10°. Cover crop and mulch any bare spots. Till only flats or on contour. Sow swale soft mounds with cover crops at 4x agricultural density and plant with edible trees along with pioneer legume trees at 10x density. Chop-and-drop pioneers for mulch at 12-18 months.

Test yourself: can you spot 2 errors in the real-world design snippet above?

Online Resources

en.wikipedia.org/wiki/Permaculture

Geoff Lawton's videos and courses are top quality.

http://pfaf.org *search plants by function (e.g. nitrogen fixers).*

Books

Holzer, Sepp, Sepp Holzer's Permaculture (256 p., 2004). *Short, beautiful, practical. Not systematic.*

Bane, Peter, The Permaculture Handbook (464 p., 2012), *modern, illustrated, wordy, with a useful pattern language.*

Mollison, Bill, Permaculture: A Designer's Manual (574 p., 1988). *Systematic, comprehensive, difficult, dated.*