

# Permaculture Principles

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An Introduction by Damian Mason

“Permaculture is a philosophy of working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless labor; and of looking at plants and animals in all their functions, rather than treating everything as a single product system.”

- Bill Mollison



# Specialties Within Permaculture

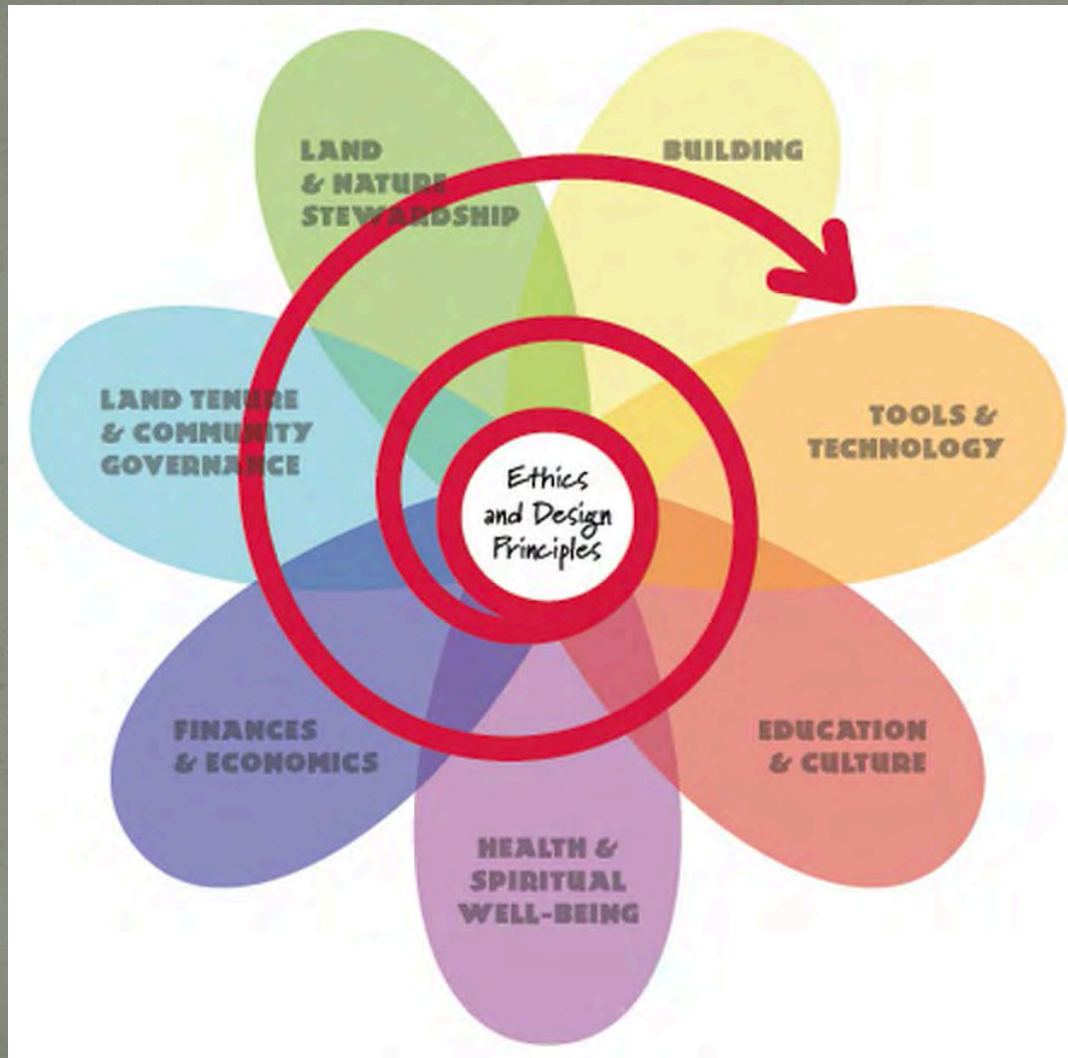
- Organic Gardening
- Native Plants
- Aquaponics
- Greywater Systems
- Natural Buildings
- Farmer's Markets
- Slow Food
- Community Gardens
- Eco-villages & Cohousing
- Bioremediation
- Social Justice
- Sustainable Cities
- Food Banks & Gleaning Programs
- Animals & Bee-Keeping
- Disaster Relief & Preparedness
- Conflict Resolution
- Solutions to Climate Change

# Is there a animal that embodies Permaculture practices & principles?

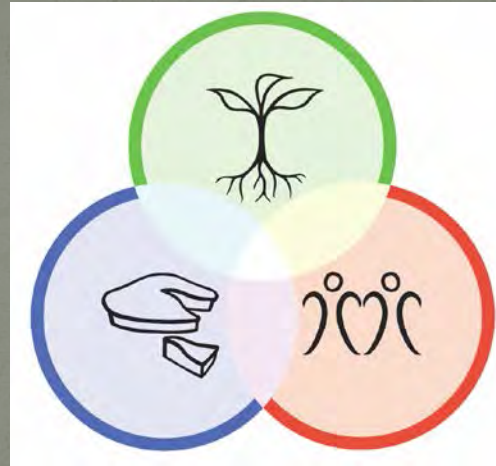


- Beavers are a keystone species that turn deserts into gardens and mitigate drought & climate change.
- Uses local material to build home & makes habitat for many others as well. Shares lodge in winters.
- Hydrology 101: Slow it, Spread it, Sink it

# The Seven Branches of Permaculture Action



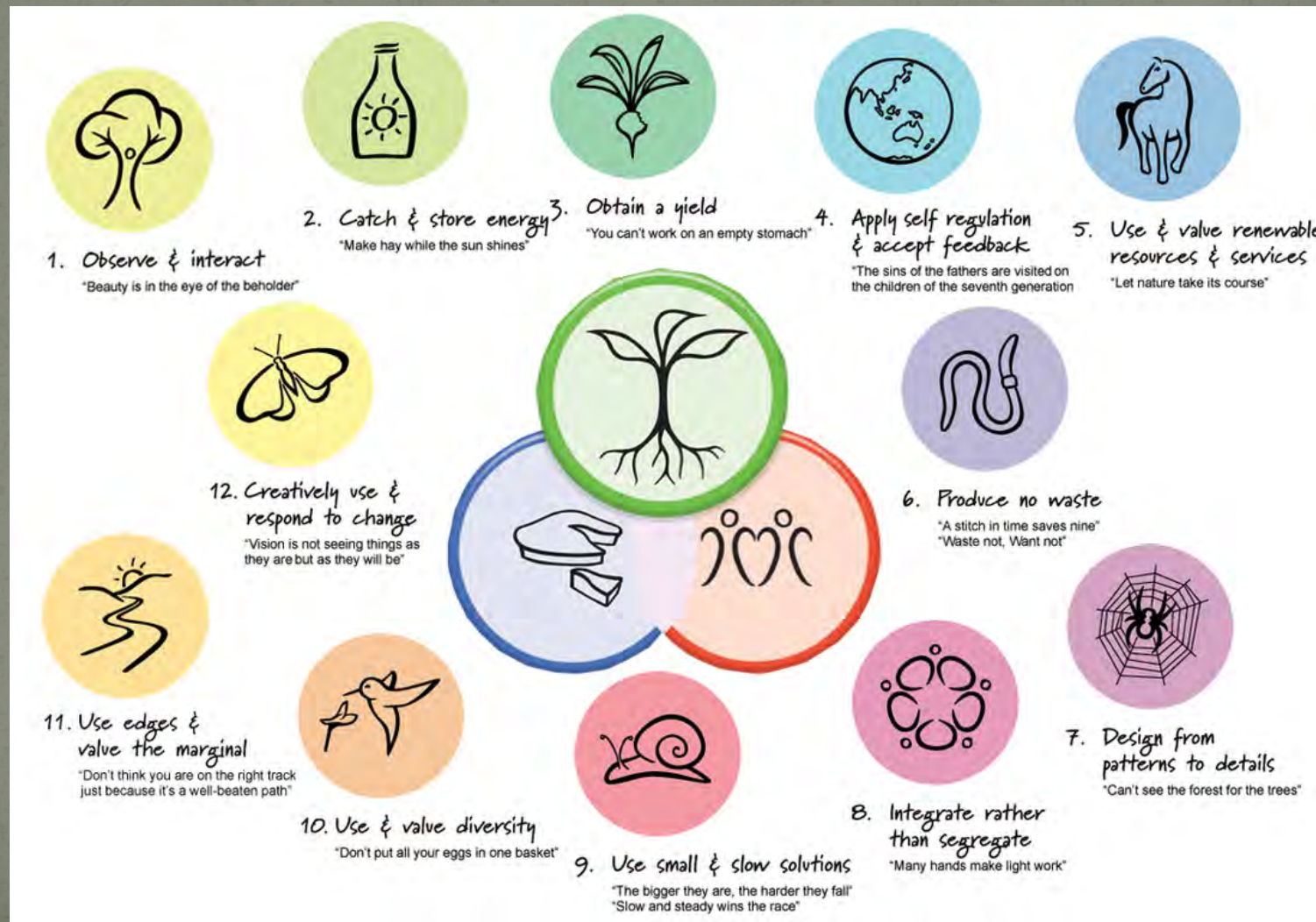
# Ethics: Earth Care, People Care, Fair Share



- Take care of the earth. Leave it better than you found it.
- Care for all people.
- Return the surplus so that all may get a Fair Share.

The focus is on creating a synergy where the whole is greater than the sum of its parts.

# The 12 Permaculture Principles as defined by David Holmgren in his book: *Permaculture: Principles and Pathways Beyond Sustainability*





# Observe & Interact

“Beauty is in the eye of the beholder.”

By taking time to engage with nature we can design solutions that suit our particular situation.

## Example: Weed or medicinal herb?

Consider a plant that, when used as a poultice, has the ability to radically speed up wound healing. When eaten they boost the immune system, while the seed heads produce the digestive aid psyllium husk. This remarkable plant is often found just outside of the back door. It is plantain, a plant we usually dismiss as a ‘weed’.







# Catch & Store Energy

“Make hay while the sun shines.”

By developing systems that collect resources at peak abundance, we can use them in times of need.

## Example: Making good use of the sun

During height of summer sunlight is shaded from Abdallah House’s living room windows; in the cooler months it streams through and heats the thermal mass of the floor, regulating temperature. The solar panels on the roof convert sun’s energy to electricity, while the vegetables in the garden transform it into food. The fruit trees also provide wood and materials for weaving, while water collected from the roof is stored in the tank and used to irrigate the garden using gravity.





# Obtain a Yield

“You can’t work on an empty stomach.”

Ensure that you are getting truly useful rewards as part of the work that you are doing.

## Example: A barrow full of goodies

Alex shows a diverse array of produce grown at Zaytuna Farm’s urban garden demonstration site. The farm hosts hundreds of students, WWOOFers and interns every year who help to manage the gardens that provide food during their stay. Food gardening has always been central to Permaculture teaching because it is the most effective way of reducing human impact on the planet, while increasing resilience and providing a great incentive to continue working.





# Use Self-Regulation & Feedback

“The sins of the fathers are visited on the children unto the seventh generation.”

We need to discourage inappropriate activity to ensure that systems can continue to function well.

## Example: Boundaries

In this small home garden spaces are carefully organized. Level paths set lower than garden beds act as infiltration basins, preventing vegetables being flooded while storing runoff water in soil under a thick layer of woodchips. Fruit tree prunings weaved around stakes retain soil and mulch and act as a barrier to deter traffic. Kai and Sen are learning to understand boundaries. They are free to play and graze, but not to run amok.





# Use and Value Renewable Resources and Services

“Let nature take its course.”

Make the best use of nature's abundance to reduce our consumptive behavior and dependence on non-renewable resources.

## Example: Getting in touch with the earth

People can be resilient, flexible and incredibly adaptable. Working by hand can give a sense of achievement that leaves a lasting impact. This workshop run in Uganda focused on planting for biodiversity rather than for a single purpose. The students realized they could create a niche for their one acre nursery, promoting indigenous planting strategies with a vision for how they are going to shape the country's forestry efforts.





# Produce No Waste

“Waste not, want not.”

By valuing and making use of all the resources that are available to us, nothing goes to waste, just like nature works.

## Example: New life for an old bike

“I like this bike. I have another bike which is better for distance and speed. This will be my bike for going out in style. It needed repair and was given to The Bike Shed. I paid \$35 for it, and they give me the tools, parts salvaged from other old bikes, and advice I need to fix it up.”

– Lari





# Design from Patterns to Details

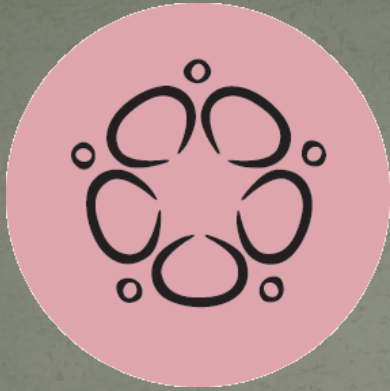
“Can’t see the forest for the trees”

By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go.

**Example: Landscape to help 300 students grow their own food**

This is part of a design based on classic permaculture patterns. Note the zoning pattern – elements most visited are kept nearest; catchment pattern – water is spread then absorbed in productive soil; and relationship pattern – food trees are planted with support trees, water and manure are near compost. Their daily chores and agriculture class work include helping to build and tend the gardens which will feed them.





# Integrate Rather Than Segregate

**“Many hands make light work.”**

**By putting the right things in the right place, relationships develop between those things and they work together to support each other.**

**Example: Cook together, learn together, laugh together**

The Seven Stars is a food based social enterprise at CERES in Melbourne operated by Turkish and Kurdish women. Making use of seasonal peaks in locally grown organic produce.

The most peaceful communities are those that embrace human diversity, and that are connected by food grown, cooked and shared with love.





# Use Small & Slow Solutions

“Slow and steady wins the race.”

Small and slow systems are easier to maintain than big ones, low-tech solutions are often more durable and easily maintained.

## Example: Adventures in urban sustainability

Small home food gardens in our suburbs play such an important role in creating sustainable, resilient networks of diverse food producing spaces. By gently tending to our fruit trees and veggies, giving them time to grow organically at their own pace in rich living soils, we can create food with incredible vibrancy and nutritional value like no other – right at our own back door.







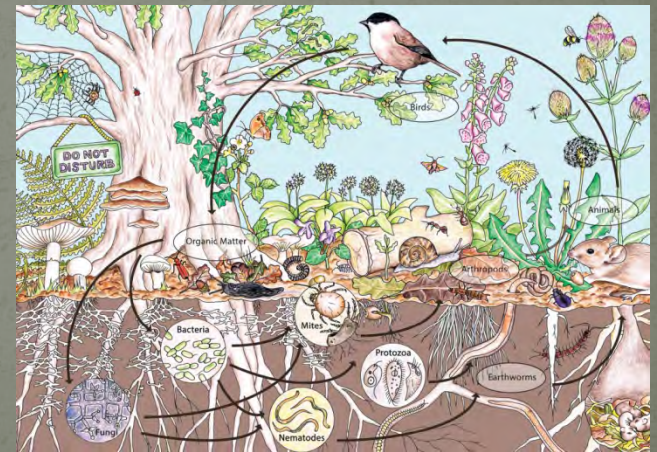
# Use & Value Diversity

“Don’t put all your eggs in one basket.”

Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.

## Example: Finding a balance in the garden

Replicating natural systems can reduce inputs and maintenance to our gardens. Permiees use a mix of perennial plants; including vegetables, herbs, flowers and some ‘weeds’ in a polyculture to create a mini-ecosystem and boost biodiversity. Adding ‘chop and drop’ mulch and leaving the soil largely undisturbed supports the soil life-cycle, initially by feeding the fungi and bacteria and then in turn the micro-organisms, insects and animals that helps keep the system in balance.





## Use Edges & Value the Marginal

“Taking the road less-traveled made all the difference.”

The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.

### Example: Share the edge

Over the fence from the City Farmer Compost Demonstration Garden, the Maple Community Garden spreads immaculately along a disused railway line. It is the first of a number of community food and flower gardens that follow the railway line east through Vancouver. Community gardens provide extra edge between gardeners, for sharing of ideas, methods, seeds, produce, and company.





# Creatively Use & Respond to Change

“Vision is not seeing things as they are but as they will be.”

We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.

## Example: Changing the climate around Daylesford

An old tomatillo is found, it's intricate outer case has begun decomposing but it's contents are still edible. Daylesford Community Food Gardeners are at work compost building at their 'annual food' garden, one of the five around town. The group is establishing a food system enabling free, organic food in an era of increasing climate chaos, peak oil and dislocation from healthy foods and environments. Community gardening, 'social warming' in an era of global warming.



# So What Does Permaculture Look Like In Your Back Yard?



Home-scale permaculture designs can take many forms depending on your space & desires for use.