



Principles: Work with nature, not against it

Use relative placement to create beneficial connections - link elements in a system together so that each is working for and with the other

Produce no waste - cycle and recycle - only generate outputs that are a yield you want or can be used as an input for something else in your system.

Catch and store energy - sun, wind, water, work, enthusiasm and any other type of energy: think about maximising the number of times you use it from 'source to sink' (i.e. from where it enters your system to where it leaves)

Make the least change for the greatest effect - choose the smallest intervention possible for the most important effect. The less energy and effort in the better the ratio of work to yield. The more focused our interventions, the easier it is to understand and learn from the effects.

Use renewable resources - use what can be replaced and recycled without making irreversible changes to the environment.

Create self sustaining systems - put the energy into understanding and designing so that the system can look after itself with little work (80:20). This often means favouring perennial and self-replicating resources or very long-lived ones.

Each key function is supported by multiple elements - a system is more resilient if every important thing that needs to happen is done in more than one way. If one element breaks down, the system still survives.

Each element performs multiple functions - a system is more efficient if every element in it has more than one valuable use (ideally at least 3 functions!). No space in the system is wasted, and if the system's needs (functions) change, the element doesn't become completely redundant.

Work at the appropriate scale - the scale which is appropriate to the task, and where you get the most valuable yield for the least effort. On a smaller scale the relationships and interactions within the system can be observed, understood and responded to, so start small and work outwards from these well-managed areas.

Understand and create niches - yield is limited not by size but how effectively we use different niches. The greater the number of niches, the greater the diversity and resilience.

Use and value edges - where two ecosystems (or systems) meet there is more diversity and exchange. So, edges can be highly productive. Straight lines minimise edge.

Understand and work with succession - natural systems are constantly working towards a climax state and then a new cycle of life. Humans constantly grow, learn and change. Design your systems to work with this unstoppable process: use it, accelerate it, don't fight it.