

## ***Design Activity – Hints on the Process***

The main purpose of the design activity is to provide an opportunity for supported practice & to show that you have achieved and are able to implement an understanding of the permaculture principles and their application using the design process.

### **Step One: Survey**

#### **Site analysis:**

- Create a base map with existing boundaries, structures, land/vegetation types (pasture, trees, etc.), water bodies, access routes, etc. You can also make a site profile/transect to show slope/shape of land.
- List information on climate, soil, plant species (esp. those indicating types of site), water/moisture, wind, microclimates, etc. Pay attention to those things that may act as limiting factors and/or resources, and potential hazards e.g. flooding, fires. Include historical information about the site.
- List areas/types of erosion (leaks) i.e. where resources are being lost from the site e.g. soil, nutrients, water, money, skills, etc.

#### **Client Analysis:**

- Use client questionnaire handout as a basis for your client interview.
- List goals of client - their vision for the land, what they want to achieve.
- What is their timeframe for achieving these goals?
- List the resources they have, e.g. time, skills, money, etc.
- List their constraints/limiting factors, other relevant information.

### **Step Two: Analysis - Identify Functions/Areas of Production needed**

- What functions are required to meet the needs of the client & land, prevent the resource leaks etc? e.g. livestock, irrigation, income generation, soil conservation, shelter, security, etc. Some of the "areas" can be sub-divided e.g. income generation into bees, vegetables, fruit, livestock, crafts, etc.

### **Step Three: Design**

- What systems are needed to fulfill the functions required?
- List these & examine linkages/beneficial relationships that exist between the systems. Examine the needs/outputs/characteristics of the different systems (systems' analysis).
- Experiment with placement of systems (using a map) & examine if their productivity can be improved (or erosion reduced) by siting them in different places.
- Select and place elements to fulfil the functions identified as needed in the different systems. Give an idea of species' composition of relevant systems e.g. windbreaks, orchard, kitchen garden, etc.
- Integrate functions to satisfy needs with outputs i.e. allow the systems/elements to do the work to decrease effort (work) & waste (pollution).

### ***Feedback to client***

Feedback the outcome so far & if the client has any changes/suggestions etc. Is the design helping to achieve their goals while meeting the needs of the land? Are new problems being created?

### **Step Four: Implementation & Maintenance**

- Detail the sequence of implementation - which systems/elements go in first (priority ranking). Give an idea of time needed to implement the different priorities.
- Give an idea of costs of implementation over time.
- Give an idea of outputs coming from the designed system, over time if possible.
- Detail how the design is maintained and/or added to over time (including the priorities, sequence and costs of doing this).
- Detail how the design involves and/or benefits the community/region as a whole.
- Make a detailed map with systems & placement.

### **Step Five: Evaluate**

- Feedback the design so far & if the client has any changes/suggestions etc. Is the design helping to achieve their goals while meeting the needs of the client & land? Are new problems being created? Is the design realistic/achievable? Are there any unnecessary costs?

### **Step Six: Tweaking**

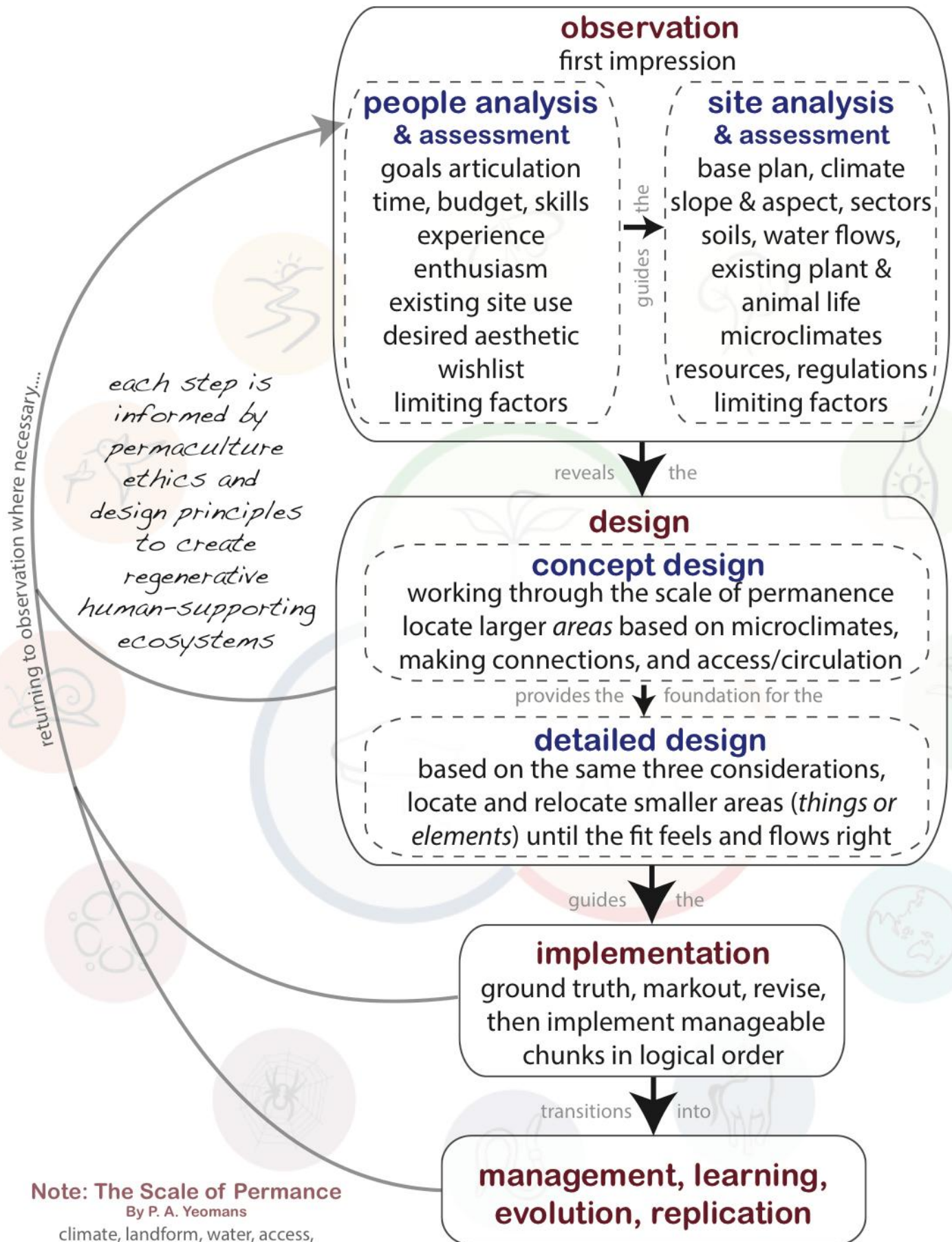
- Modify as required.

### **Presentation**

You will have 60 minutes for presentation of which approximately:

- 5 mins on introduction, summarising step one.
- 40 mins to present the design, including all the items in step four. Include information on process - how you came to reach the decisions/selections you made, what other options had you considered?
- 5 minutes question/answers, clarification etc.
- 10 minutes feedback from client/tutors (don't allow feedback on this feedback!).
- Make sure all the group is involved in the presentation.
- You don't have to give details of every plant/animal in the design, but give representative samples e.g. structure of the windbreak, orchard, vegetable beds etc.

# permaculture design process



## Note: The Scale of Permanence

By P. A. Yeomans

climate, landform, water, access,  
trees, structures, fencing, soils  
crops,<sup>1</sup> animals<sup>2</sup>

by Dan Palmer & Adam Grubb

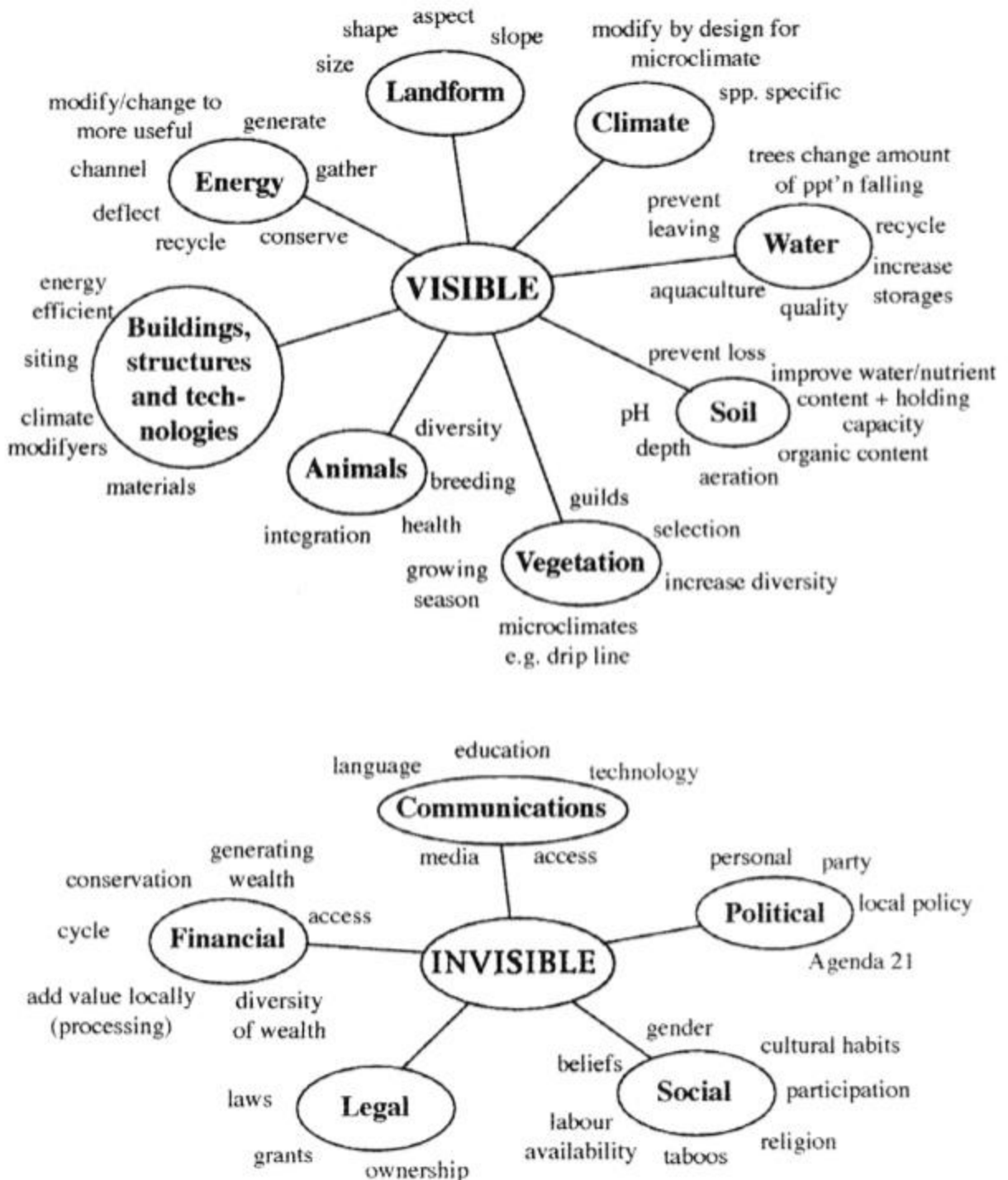
Background image by  
Richard Telford: permacultureprinciples.com



## LIMITING FACTORS IN DESIGN (BUILDING BLOCKS)

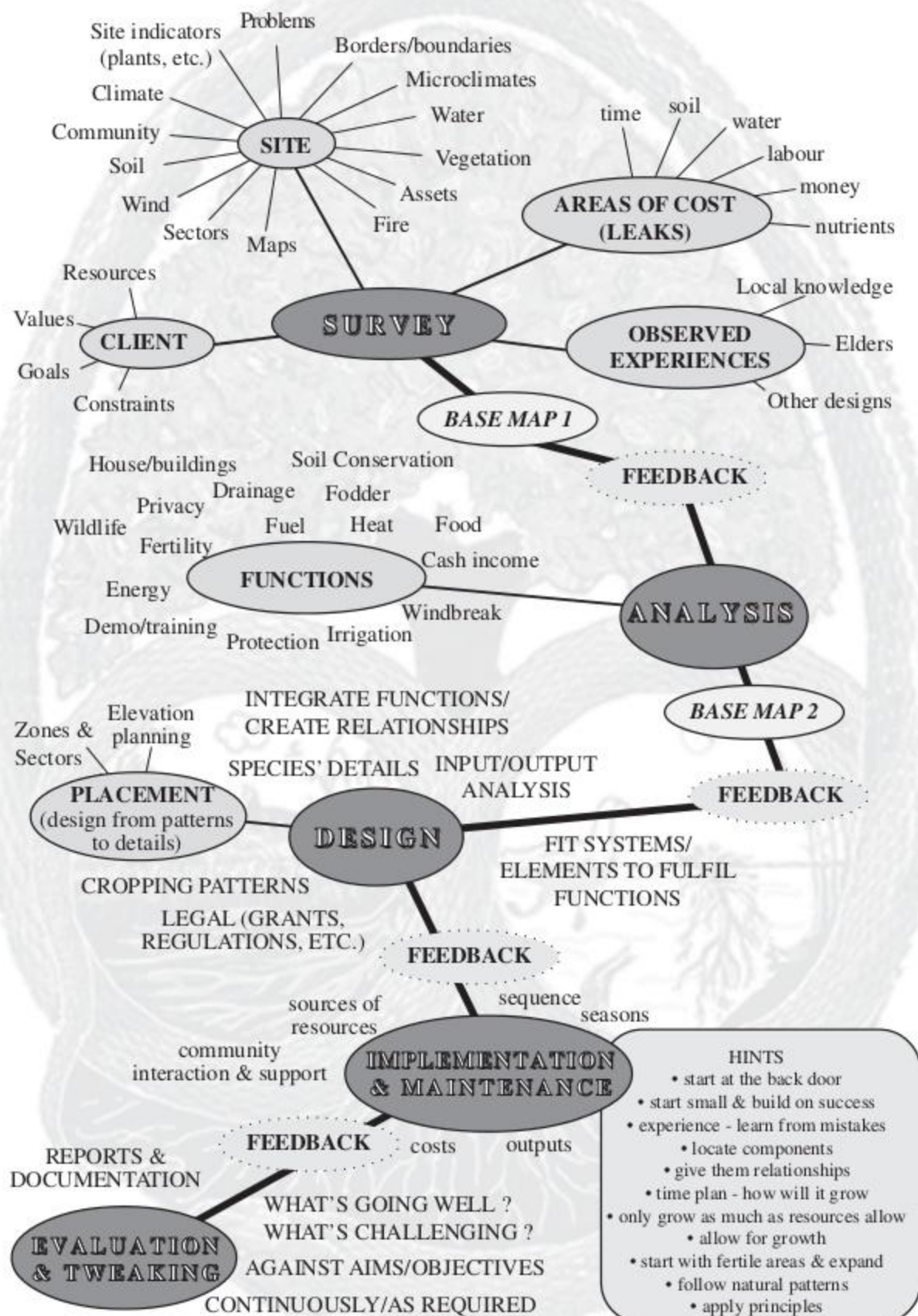
These factors ultimately decide our strategies in design

*"Limits are the foundation of creativity"*





# SADIMET DESIGN PROCESS



## *Themes in Design*

### **Yield**

The sum total of surplus energy produced by, stored, conserved, reused or converted by the design. Energy is in surplus once the system itself has available all its needs for growth, reproduction & maintenance (and thus the extra is available for export, use or trade).

### **Resource**

Energy storage to assist yield.

Categories of resources;

1. Those which increase with modest use e.g. coppice, information;
2. Those unaffected by use e.g. sunlight, water through mill, view;
3. Those which disappear or degrade if not used, e.g. veggies (overcome by 'weeds', etc), bees;
4. Those that are reduced by use. e.g. oil, clay deposits;
5. Those that pollute or destroy other resources if used. e.g. nuclear power, concrete.

1-3 are commonly produced in natural systems & rural living situations & are the only sustainable basis of society.

4 & 5 are as a result of urban & industrial development.

*(maximise number of useful energy storages).*

### **Entropy**

Dissipated energy - no longer in a form usable by the system - bound or dissipated energy; energy unavailable for work, or not useful to the system  
*( $1+1=1.5$  ....minimise entropy).*

### **Synergy**

Organisms are energy transformers. They survive by using this energy and their survival is a function of their ability to use it. Energy produced by elements in harmonious cooperation with each other is GREATER THAN THE SUM OF- ITS PARTS ( $1+1=3$  ....maximise synergetic connections).

### **Guild**

Assemblies of plants & animals of different species, occurring together over their range. Guilds act to assist our health, aid our management (work) and to buffer against adverse environmental effects.

### **Microclimate**

The summation of environmental conditions at a particular site, as affected by local factors rather than climatic ones.