

**PERMACULTURE : A DESIGNERS MANUAL CHAPTER- HEADINGS & sub headings****C 1 INTRODUCTION**

1.1	The philosophy behind PC
1.2	Ethics
1.3	PC in landscape and society Basis of PC is beneficial design. PC can be added to all other ethical training and skills. Has potential of taking a place in all human endeavours. Concentrated on already settled areas and agricultural Lands. These require drastic rehabilitation and rethinking. By integrating food supply & settlement, catching water from roof areas and nearby fuel forest that receives waste and supplies energy we free most of the globe for the rehabilitation of natural systems. Difference between designed ecosystem and natural ecosystem. – Anthropocentric. Also need nature –centred ethic for wilderness conservation. We must govern greed and supply own needs from existing settlements. Then we can withdraw from the agricultural. Landscape and allow natural systems to flourish.

**C.2 CONCEPTS IN THEMES IN DESIGN**

2.1	Introduction
2.2	Science and the thousand names of god
2.3	Applying laws and principles to design
2.4	Resources
2.5	Yields
2.6	Cycles
2.7	Pyramids, food webs, growth and vegetarianism
2.8	Complexity and connection
2.9	Order or chaos
2.10	Permitted of forced functions
2.11	Diversity
2.12	Stability
2.13	Time and yield
2.14	Principle summary
2.15	References

**C3 METHODS OF DESIGN**

3.1	Introduction
3.2	Analysis: Design by listing characteristics of components
3.3	Observation: Design by expanding on direct observations of a site
3.4	Deduction from nature: Design by adopting lessons learnt by nature
3.5	Options and Decisions: Design as a selection of options or pathways based on decisions
3.6	Data overlay: Design by map overlays
3.7	Random Assembly: Design by assessing the results of random assemblies
3.8	Flow diagrams: Design for work places
3.9	Zone and sector analysis: Design by application of a master plan
3.10	Zoning of information and ethics
3.11	Incremental design
3.12	Summary of design methods
3.13	The concepts of guilds in nature
3.14	Succession: evolution of a system

3.15	The establishment and maintenance of systems
3.16	General practical procedures in property design
3.17	Principle summary
C.4 PATTERN UNDERSTANDING	
4.1	Introduction
4.2	A general pattern model of events
4.3	Matrices and the strategies of compacting and complexing components
4.4	Properties of media
4.5	Boundary conditions
4.6	The harmonics and geometries of boundaries
4.7	Compatible and incompatible borders and components
4.8	The timing and shaping of events
4.9	Spirals
4.10	Flow over landscape and objects
4.11	Open flow and flow patterns
4.12	Toroidal phenomena
4.13	Dimensions and potentials
4.14	Closed (spherical) models: accretion and expulsion
4.15	Branching and its effects:
4.16	Orders of magnitude in branches
4.17	Orders and dimensions
4.18	Classification of events
4.19	Time and relativity in the model
4.20	The world we live in as a tessellation of events
4.21	Introduction to pattern applications
4.22	The tribal use of patterning
4.23	The mnemonics of meaning
4.24	Patterns of society
4.25	The arts in the service of life
4.26	Additional pattern applications
4.27	References and further reading
4.28	Designer's checklist
C.5 CLIMATIC FACTORS	
5.1	Introduction
5.2	The classification of broad climatic zones
5.3	Patterning in global weather systems; the engines of the atmosphere
5.4	Precipitation
5.5	Radiation
5.6	Wind
5.7	Landscape effects
5.8	Latitude effects
5.9	References
5.ten	Designer's checklist
C.6 TREES AND THEIR ENERGY TRANSACTIONS	
6.1	Introduction
6.2	The biomass of the tree
6.3	Wind effects
6.4	Temperature effects
6.5	Trees and precipitation
6.6	How a tree interacts with rain
6.7	Summary
6.8	References
C.7 WATER	
7.1	Introduction

7.2	Regional intervention in the water cycle
7.3	Earthworks for water conservation and storage
7.4	Reduction of water used in sewerage systems
7.5	The purification of polluted waters
7.6	Natural swimming pools
7.7	Designer's checklist
7.8	References
C.8 SOILS	
8.1	Introduction
8.2	Soils and health
8.3	Tribal and traditional soil classifications
8.4	The Structure of soils
8.5	Soil and water elements
8.6	Primary nutrients for plants
8.7	The distribution of elements in the soil profile
8.8	pH and soils
8.9	Soil composition
8.10	Soil pores and crumb structure
8.11	Gaseous content and processes in soils
8.12	The soil biota
8.13	Difficult soils
8.14	Plant analysis for mineral deficiencies: soil remedies
8.15	Biological indicators of soil and soil conditions
8.16	Seed pelleting
8.17	Soil erosion
8.18	Soil rehabilitation
8.19	Soils in house foundations
8.20	Life in earth
8.21	The respiration of earth
8.22	Designer's checklist
8.23	References
C.9 EARTHWORKING AND EARTH RESOURCES	
9.1	Introduction
9.2	Planning earthworks
9.3	Planting after earthworks
9.4	Slope measurement
9.5	Levels and levelling
9.6	Types of earthworks
9.7	Earth constructs
9.8	Moving the earth
9.9	Earth resources
9.10	References
C.10 THE HUMID TROPICS	
10.1	Introduction
10.2	Climatic types
10.3	Tropical soils
10.4	Earthshaping in the tropics
10.5	House design
10.6	The tropical home garden
10.7	Integrated land management
10.8	Elements of a village complex in the humid tropics
10.9	Evolving a polyculture
10.10	Themes on a coconut -or palm-dominant polyculture
10.11	Pioneering
10.12	"Animal tractor" systems
10.13	Grassland and range management

10.14	Humid tropical coast stabilisation and shelterbelts
10.15	Low island and coral cay strategies
10.16	Designer's checklist
10.17	References
<b>C.11 DRYLAND STRATEGIES</b>	
11.1	Introduction
11.2	Precipitation
11.3	Temperature
11.4	Soils
11.5	Landscape feature in deserts
11.6	Harvesting of water in arid lands
11.7	The desert house
11.8	The desert garden
11.9	Garden irrigation systems
11.10	Desert settlement - broad strategies
11.11	Plant themes for drylands
11.12	Animal systems for drylands
11.13	Desertification and the salting of soils
11.14	Cols and montane deserts
11.15	Designer's checklist
11.16	References
<b>C.12 HUMID TO COOL CLIMATES</b>	
12.1	Introduction
12.2	Characteristics of a humid cool climate
12.3	Soils
12.4	Landform and water conservation
12.5	Settlement and house design
12.6	The home garden
12.7	Berry fruits
12.8	Glasshouse growing
12.9	Orchards
12.10	Farm forestry
12.11	Free- range forage systems
12.12	<p>The lawn</p> <p>Summary 12.12 The Lawn. Basically lawns are bad news. Middle class loathe sullyng their turf with mere food.</p> <p>History. 1897 geese and sheep on rural estates grazing. Central Park then sheep described as lawn mowers.</p> <p>Estimate 16 M acres (1978). Increased since then. Single biggest "crop" in 1978, USA. Huge amount of input to maintain. Petrol. Fertilisers. Waste problem – poisoned grass waste rich in poisons eg DDT and nitrogen. 44 % water consumption in Ca. used on lawns. Huge cost. Instead of grass the world could grow food. Money wasted on lawn culture could go to Permaculture in poor areas... Lawns: badge of wilful waste. The curse of modern town landscapes as sugar cane is a curse of lowland coastal tropics and cattle the curse of rangelands. Lawns should be taxed. \$5 /sq m. leave some useful lawn.</p> <p>Lawn reform - a rich field of innovative design to production. Get rid of sterile lawns</p> <p>152 words</p>
12.13	Grasslands
12.14	Rangelands
12.15	Cold climates
12.16	Wildfire
12.17	Designer's checklist
12.2	References
<b>C.13 AQUACULTURE</b>	
13.1	Introduction

13.2	The case for aquaculture
13.3	Some factors affecting total useful yields
13.4	Choice of fish species(variety, food, health) and factors in yield
13.5	Fish pond configurations and food supply
13.6	Farming invertebrates for fish food
13.7	Channel, canal, chinampa
13.8	Yields outside the pond
13.9	Bringing in the harvest
13.10	Traditional and new water polycultures
13.11	Designer's checklist
13.12	References
<b>C.14 THE STRATEGIES OF AN ALTERNATIVE GLOBAL NATION</b>	
14.1	Introduction
14.2	Ethical basis of an alternative global nation
14.3	A new United Nations
14.4	Alternatives to political systems
14.5	Bioregional organisation
14.6	Extended families
14.7	Trusts and legal strategies
14.8	Developmental and property trusts
14.9	Village development
14.10	Effective working groups and right livelihood
14.11	Money and finance
14.12	Land access
14.13	An ethical investment movement
14.14	Effective aid
14.15	Futures
14.16	References and resources