

PERMACULTURE NOOSA



Submission -The Future of Noosa & our Biosphere Reserve

Prepared for: Noosa Council

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INTRODUCTION

Noosa Permaculture is an Incorporated Association formed to encourage and promote Permaculture within the Noosa area of the Sunshine Coast of Australia. The organisation is a well run local association with a wide and enthusiastic membership, many with considerable practical and theoretical skills in the application of permaculture, sustainable agriculture and sustainable living. Noosa Permaculture holds monthly meetings open to the public, workshops, lectures etc. A Permaculture Noosa Seed Savers Group meets monthly to promote and carry out the preservation, distribution and exchange of seeds in our local area. The aims and objectives of Noosa Permaculture and those of the Noosa Biosphere Reserve are a perfect fit, as demonstrated by the aims and objectives of both organisations and as outlined on their websites:

Biosphere Reserves Aims and Objectives

- 1 Biosphere reserves are sites that demonstrate innovative approaches to, nationally and internationally within a world network of biosphere reserves. conservation and sustainable development. They share their experience and ideas regionally
- 2 Biosphere reserves go beyond confined protected areas to where sustainable economic development is made possible through partnerships with local people.
- 3 Biosphere reserves are about developing quality economies based on local community action and entrepreneurship, sound science, public-private sector partnerships and networking.
- 4 Biosphere reserves also provide living laboratories to experiment with and showcase various approaches to sustainable development that are culturally relevant to local communities.

Permaculture Noosa Aims and Objectives

- A. To provide a sustainable alternative to ornamental gardens and monoculture, with edible gardens and farm designs; integrating crops and animals plus eco-friendly architecture and renewable energy systems. (note pts 1, 3 & 4 above)
- B. To provide the local community with information and guidance on sustainable living based on Permaculture Principles. (note pts 3 & 4 above)
- C. To organise activities to fund the operation of the group; supply newsletters and provide access to plants and seeds. (Note pts 3 & 4 above)!
- D. To provide practical education with hands on workshops and field days. (note pts 1, 2, 3 & 4 above)

Permaculture Noosa links To the Wider Community

Permaculture Noosa is loosely linked to the world wide Permaculture movement which was initiated by 2 Australians, Bill Mollison and David Holmgren in the late 1970's. In addition Geoff Lawton who taught with Bill Mollinson is the founding member of Permaculture Noosa. As well, members of Permaculture Noosa are respected permaculture educators both locally and internationally. Locally, Permaculture Noosa has informal links to organisations including the Yandina Community Garden, the Cooroy Community Garden, Eudlo Seed Savers Group & the Gympie Seed Savers Group, some of which grew out Permaculture Noosa.

PROJECT OUTLINE

Demonstration & Implementation of Solutions to Local & World Wide Environmental Problems

Permaculture offers many solutions to the problems of potentially disastrous climate change, population increases and other crises (such as fossil fuel shortages and food production) facing the world. Permaculture Noosa would appreciate the opportunity to work with Noosa Council and Noosa Biosphere Limited to help to "Drought Proof" and "Flood Proof" the Noosa Area as well as providing some protection to the local population against looming food shortages. It would be a wonderful outcome for Noosa to provide a shining example of sustainability to other communities and so inspire them to follow.

With the recent news that the state government will no longer subsidise development costs, this will need to be carried by local councils and therefore the consumers. Permaculture principles offers ways and means of cutting development costs by ensuring that

- All energy into the site is trapped and used
- All renewable resources and services are used and valued
- All waste is used and recycled on site
- Integrate rather than segregate at all levels
- Use edges and value the marginal
- Creatively use and respond to change ¹

Education and Guidance

Ways of implementing this objective would be through the provision of advice, information and encouragement to property owners, developers and residents, by incorporation of sustainable principles into the Noosa Plan and by incorporation of sustainable principles into infrastructure, such as sewage, waste and stormwater disposal. Specific examples of these include:

- Urine collection treatment and re-use as fertiliser as pioneered and practised in Sweden.
- Stormwater collection, management and use, both retrofitting and in new developments. As used with the Atlantis products ²

¹ www.holmgren.com.au

² <http://www.stormwater-harvesting.com.au/stormwaterharvesting.html>

- Worm farm treatment of waste water and conversion to fertiliser. Including waste from kitchen sinks see ECO Design greywater recycling system ³
- Composting
- Greatly increase the water holding capacity of the soil by the incorporation of humus and carbon.
- Use of swales in rural areas and urban sites as demonstrated by established urban communities in Geoff Lawnton's video Food Forest suburb ⁴
- The looking at alternatives to housing developments to include the concept that a housing development is not divided into separate lots but designated areas that include the dwelling and some additional yard space with the remaining property held in common and managed by homeowners so that infrastructure is re-thought to reduce costs. ⁵

Provision of a Demonstration/Experimental Facility

It is suggested that Council set aside or provide some land (possibly degraded agricultural land) for a permaculture experimental station/model/example. This would include an educational facility for local residents and tourists (including backpackers & WWOOF'ers⁶); or anyone who would like to learn more about sustainable agriculture, sustainable living, sustainable architecture and nature conservation. Seminars, lectures and workshops would include topics such as:

- Beekeeping
- Nesting boxes and habitat for native birds
- Production of green manure
- Composting techniques
- Attracting frogs to the garden
- Growing vegetables for the tropics and sub-tropics
- Saving seeds
- Plant propagation
- Construction of swales, dams and ponds even on normal house blocks to increase the water carrying capacity of the soil and reduce stormwater costs
- Worm farms
- Poultry keeping
- Use of bamboo
- Aquaponics
- Sustainable housing
- Efficient energy use in whole communities
- many more.....

Ideally the land would be situated in the hinterland, but not too distant from the more populous coastal part of the shire, a 30-40 min drive and with access to public transport. It would have a minimum size of 4 ha, but preferably significantly larger.

Depending on the nature of such a facility, a significant proportion of the land would be allocated to reforestation with a diverse range of endemic native plants. These could include

³ www.greywater.com.au

⁴ <http://www.geofflawton.com/fe/60356-food-forest-suburb>

⁵ "Low Impact Development *Technical Guidance Manual for Puget Sound*" January 2005

⁶ Willing Workers On Organic Farms

“Bush Tucker” species, valuable timber species, native fauna habitat etc. This fits perfectly into the concept of Zone V of the ideal Permaculture installation.

It is intended that the land would be divided into zones based on the Permaculture principles of efficient energy planning, e.g.:

Zone I - Vegetable and Herb Gardens

Zone II- Intensive Fruit and Nut Systems, Small livestock Forage

Zone III - Extensive Food and Structural Forest

Zone IV - Semi semi-managed, semi-wild, managed forestry and wildlife.

Zone V - Unmanaged or barely managed natural “wild” systems.

Better management and utilisation of stormwater by the construction of swales, gabions and other water conservation ideas (see above) would be incorporated in this model facility to demonstrate ways of improving the shire's resilience in the face of drought and floods etc. There would be increased fertility, increased capacity for food production and biological diversity.

A variety of methods of waste recycling could also be established on site (see above), as an example to others. Including Reed Beds and Aerobic grease traps.⁷

Production of locally produced food to be consumed locally would be encouraged, reducing our dependence on complex, oil hungry transport systems.

A permaculture group could be the basis for a bioregional association. By mapping what resources are available locally, a community can build resilience against things out of their control. Resilience is the ability to absorb disturbances and adapt. This may be in the form of disasters but could also be the effects of a rise in energy costs or job cuts within corporations (Lawton) (See Appendix A)

Housing

With the cost of traditional housing on the increase both in terms of monetary value and the cost to the environment the encouragement of sustainable and economic building methods needs to be further researched and encouraged. We do not advocate cheap substandard housing but rather strong, organic, sustainable housing and the encouragement of sustainable industry in relation to those houses including Hempcrete.⁸, rammed earth, straw bale, super adobe, Rockcote. If a variety of methods are included each type can be compared for price, performance, building waste and design. Houses should also be designed to be smaller so they are more affordable with more land space contributed for growing food.

⁷ “The Use of Reed Beds for the Treatment of Sewage & Waste water for Domestic Households”
Lismore City Council web download 31/8.2012 www.lismore.nsw.gov.au/page.asp?f=RES-IRA-28-72-12

⁸ <http://www.hempmasonry.com/>

Direct Economic Benefits to Noosa Shire

A well designed educational/demonstration facility could attract participants from further afield in Australia and internationally - another “string” in Noosa Shire’s economic bow. Further, it would be a demonstration of support by Council for the development of important facilities in the hinterland area of the shire.

The value of the land would be greatly increased by the establishment of the Permaculture facility. It would be a very good investment of Council funds.

Improvements in the water holding capacity of the soil, reduction in erosion, reduction in flooding and recycling of waste will provide further economic benefits to the shire.

If permaculture principles were applied to all new developments it would decrease the continual rising costs of infrastructure and the continual need for and increasing costs of renewing and up keeping those structures. Of course there are certain structures that do need to be kept up and developed but if these are observed within the principles of observing nature’s response to many of those needs we will be able to develop more natural solutions rather than more technical solutions which often require high costs and higher maintenance.

Finance

It is envisaged that input into the design and construction of such a facility could be sourced through volunteers and donations by private businesses, while income for the upkeep and maintenance would be financed by activities such as educational courses and workshops, sale of plants and seeds, guided visits and Market Days. Initially financial assistance from Noosa Shire and other Government bodies would be necessary for the acquisition of the land and provision of basic infrastructure such as access. However, important conservation work could be started without any more financial investment than the provision of the land.

If some of the land is offered for sale so that interested persons can buy into the land at a minimal rate to develop on the permaculture village model this would further reduce cost to council at the added advantage of having onsite caretakers.

Conclusion

Noosa Council has requested submissions for “big ideas on the future of Noosa” and our Biosphere Reserve, “from people who have a big picture of the way we should be living and working in our environment, and then we want to hear some smart ideas about how all of that should be managed.”

Noosa Permaculture is already engaged in exploring and carrying out big and smart ideas relating to the way we should be living and working in our environment. With the assistance and cooperation of Noosa Council, it will enable this work to be expanded for the benefit of all. Noosa Permaculture would welcome the opportunity to further discuss these ideas with Council.

Summary

- Noosa Biosphere Reserve and Permaculture Noosa share the same aims
- Noosa Permaculture would advise and assist Noosa Council in the incorporation of sustainable principles in Council policies, regulations and advisory documents and publications.

- Noosa Council would assist Noosa Permaculture by acquiring suitable land for a Permaculture/Sustainable Living Demonstration Facility.
- There will be direct economic benefits to the shire by the reduction in drought and flood problems as well as increased fertility, and capacity for food production with reduced dependence on fossil fuels for transport, fertilisers, water and waste management.
- There will be direct economic benefits to the shire by the establishment of a facility which will attract visitors from other areas including interstate and overseas.
- There will be direct economic benefits to the shire by the increase in the capital value of the property, largely due to the efforts of volunteers and by donation. As well as a decrease in costs associated with the development of land for human habitation.
- Implementation of these proposals would result in a significant enhancement of Man and Biosphere.
- The Sunshine Coast is a declared transition region so let the Noosa Shire take the lead with implementing food and environmental security.

Reference Books:

Introduction to Permaculture by Bill Mollison with Reny Mia Slay. TAGARI PUBLICATIONS
Tasmania, Australia

PERMACULTURE A Designer' Manual by Bill Mollison. TAGARI PUBLICATIONS Tasmania,
Australia

Links to permaculture and related sites:

<http://www.ecofilms.com.au/category/permaculture/>

<http://permaculturenoosa.com.au>

<http://permaculturenews.org/2009/11/30/keyline-swales-a-geoff-lawton-darren-doherty-hybrid/>

<http://permaculturenews.org>

http://www.swedenviro.se/gemensamma_se/documents/Urinsep_eng.pdf

<http://www.scientificamerican.com/article/human-urine-is-an-effective-fertilizer/>

http://www.stormwater-harvesting.com.au/Stormwater_Harvesting.pdf

<http://www.urbanecology.org.au/topics/stormwater.html>

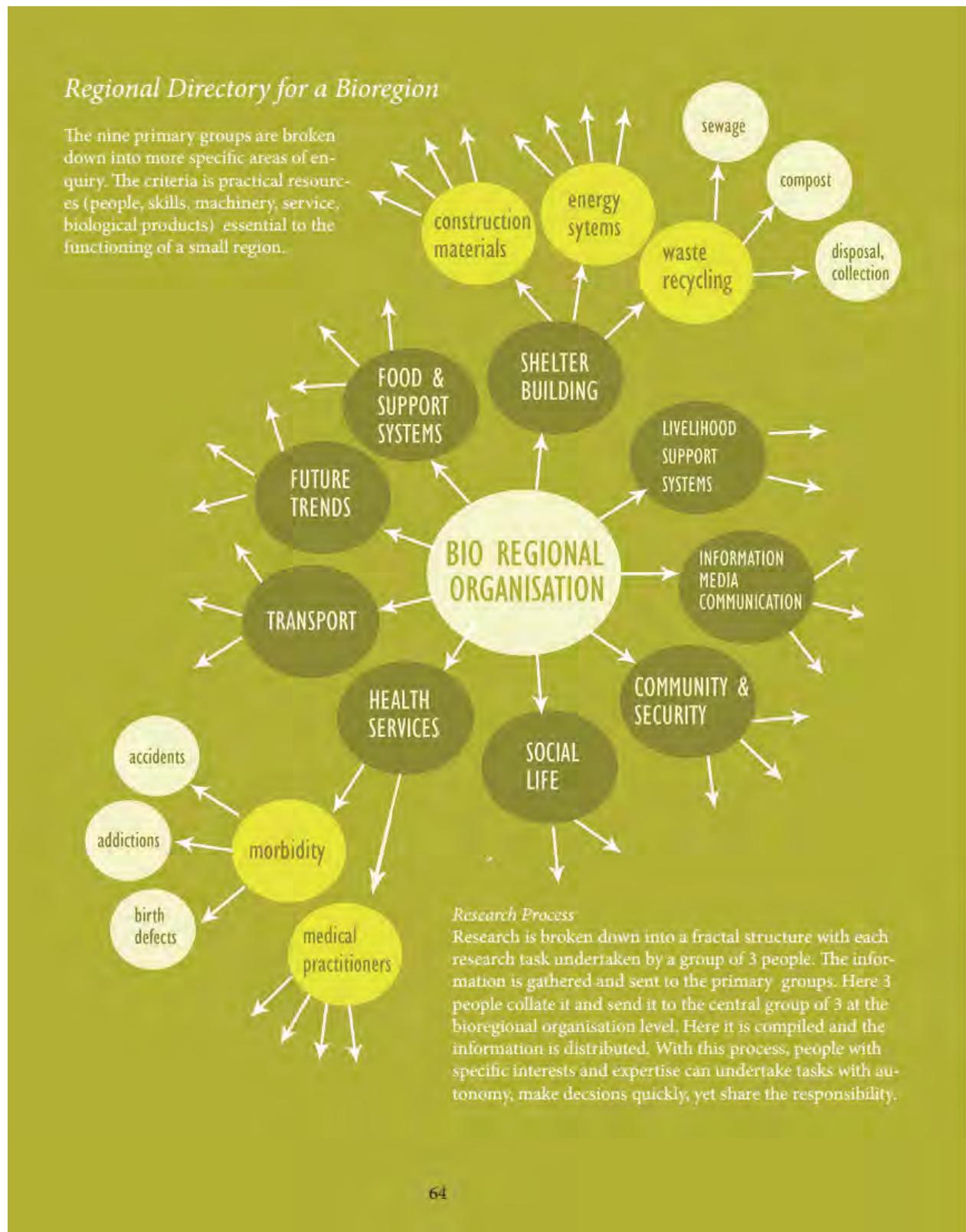
<http://www.abc.net.au/news/2011-05-31/work-begins-on-stormwater-recycling-project/2739112>

<http://www.wormfarm.com.au>

<http://www.wormsloos.com.au>

http://msue.anr.msu.edu/news/compost_increases_the_water_holding_capacity_of_droughty_soils

Appendix 1



Lawton, Geoff; PERMACULTURE DESIGN COURSE *Strategies of an Alternative Global.Nation.* 2013

Bioregional mapping

A bioregional association is an association of the residents of a natural and identifiable region. This region is sometimes defined by a watershed, at times by town boundaries, streets, or districts.

A bioregional group would map the natural, technical, service, and financial resources of the region. By doing this they could identify where leakage of resources out of the community occurs. This could be water, soil, money or talent. By mapping the bioregion's resources, gaps can be filled, changes can be monitored and uniquely local solutions can be implemented.

Not everything can be provided locally. However a community can become more self reliant by providing its core needs, keeping money flowing within the community and being responsible for its own environment. (Lawton)

Transition Town Movement

The Transition Town movement started in 2005 and its intention is to harness communities to adopt methods of transitioning from a world dependent on peak oil. It arose out of permaculture and uses permaculture principles. It looks to develop "Energy Descent Action Plans" toward localisation so dependence on oil is reduced. The Transition Handbook by the founder Rob Hopkins is a guide for communities wanting to transition. p64

Permaculture Village Model

A Permaculture model of Community Land Trust development is an intentional community, as it has as its core, the ethics of permaculture and a shared vision.

The land is developed with a main frame permaculture design. Water harvesting systems are established and sensible access is implemented. Settlement areas are suitably sited. A vision statement and plan of how the land is to be managed in the long term is defined. This is done by skilled designers before house sites are offered for lease. The elders of the community are responsible for keeping to the vision. Those wishing to be part of the land trust agree to accept the permaculture ethics and the vision of land management.

Individuals develop and are responsible for the private zone 1 surrounding their house. All other zones are part of and the responsibility of the community and require involvement in their cultivation and maintenance.

A village is ideally composed of clusters of 10 houses surrounding a community space which is shared for family and/or community events. A village with at least 3 clusters and 30 families has enough people to generate jobs within the community. Livings come from production with the land, processing products from the land, providing services and the arts. Members can apply to start up enterprises on community land, providing for the community and selling surplus outside. Jobs are not necessarily discreet and one person may have livings in a number of areas.

The association with the land in a permaculture village can develop a culture linked to; the seasons, the products of the land, the processes of caring for the land, occupations that provide real needs and the cooperation within a community that a shared vision engenders.

The intention with a permaculture village is to redefine community with the land and have connections that enable both to flourish, thus creating a permanent culture. p65 (Lawton)

Appendix 2

Permaculture Flower

The permaculture journey begins with the Ethics and Design Principles and moves through the key domains required to create a sustainable culture. The spiral evolutionary path joins together these domains, initially at a personal and local level, and then proceeding to the collective and global level.

Some of the specific fields, design systems and solutions that have been associated with the wider view of permaculture are listed below.

Land & Nature Stewardship

| | |
|--------------------------|-------------------------------|
| Bio-intensive gardening | Holistic Rangeland Management |
| Forest gardening | Natural Sequence Farming |
| Seed saving | Agroforestry |
| Organic agriculture | Nature-based forestry |
| Biodynamics | Integrated aquaculture |
| Natural Farming | Wild harvesting & hunting |
| Keyline water harvesting | Gleaning |

Building

| | |
|--------------------------------|---|
| Passive solar design | Earth sheltered construction |
| Natural construction materials | Natural disaster resistant construction |
| Water harvesting & Waste Reuse | Owner building |
| Biotechnology | Pattern Language |

Tools & Technology

| | |
|---------------------------------------|--------------------------------------|
| Reuse & creative recycling | Bio-char from forest wastes |
| Hand Tools | Co-generation |
| Bicycles and electric bikes | Micro-hydro & small scale wind |
| Efficient & low pollution wood stoves | Grid-tied renewable power generation |
| Fuels from organic wastes | Energy storage |
| Wood Gasification | Transition engineering |

Education & Culture

| | |
|------------------------------|--------------------|
| Home Schooling | Social ecology |
| Waldorf education | Action Research |
| Participatory arts and music | Transition culture |

Health & Spiritual Well-Being

| | |
|--|--|
| Home birth & Breast feeding | Spirit of place, indigenous cultural revival |
| Complementary & Wholistic Medicine | Dying with dignity |
| Yoga, Tai Chi & other body/mind/spirit disciplines | |

Finances & Economics

| | |
|---|---|
| Local and regional currencies | WWODFing & similar networks |
| Carpooling, Ride sharing & Car share | Tradable Energy Quotas |
| Ethical Investment & Fair Trade | Life Cycle Analysis & Energy Accounting |
| Farmers markets & Community Supported Agriculture (CSA) | |

Land Tenure & Community Governance

| | |
|---|---|
| Cooperatives & Body Corporates | Open Space Technology & Consensus Decision Making |
| Cohousing & Ecovillages | |
| Native Title and traditional use rights | |



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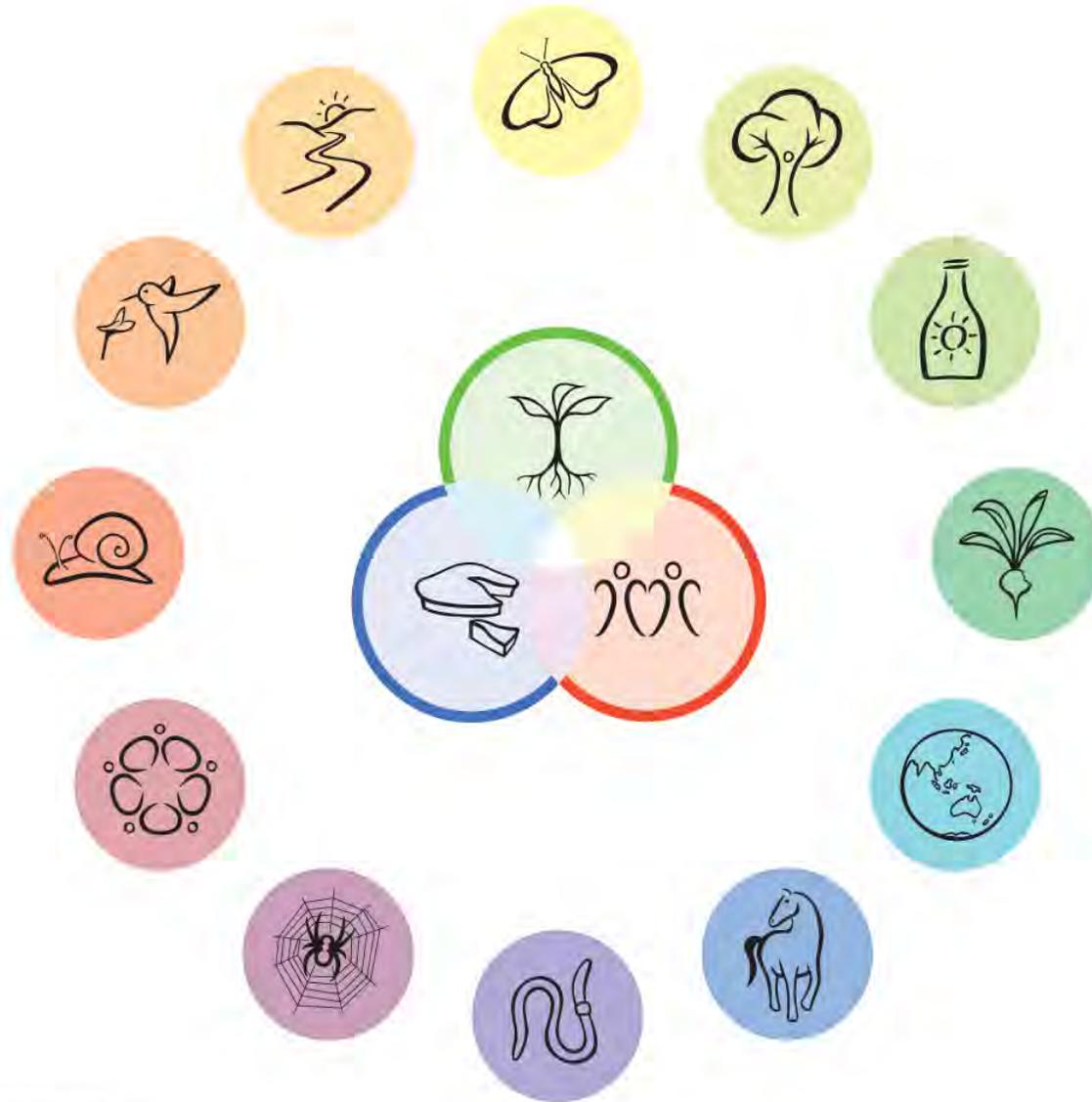
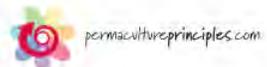
Appendix 3

Permaculture Ethics

-  Care of the Earth
-  Care of People
-  Fair Share

& Design Principles

-  1. Observe & interact
-  2. Catch & store energy
-  3. Obtain a yield
-  4. Apply self-regulation & accept feedback
-  5. Use & value renewable resources & services
-  6. Produce no waste
-  7. Design from patterns to details
-  8. Integrate rather than segregate
-  9. Use small & slow solutions
-  10. Use & value diversity
-  11. Use edges & value the marginal
-  12. Creatively use & respond to change



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