•The potential of permaculture to improve sustainable nutrition: a synthesis of thirteen case studies

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Objectives

- To assess the potential of Permaculture projects to improve nutrition
- To encourage better Monitoring and Evaluation systems for Permaculture Projects
- To expand the options for tackling global nutrition problems sustainably

Permaculture

Permaculture systems are designed for sustainability using a set of 12 design principles

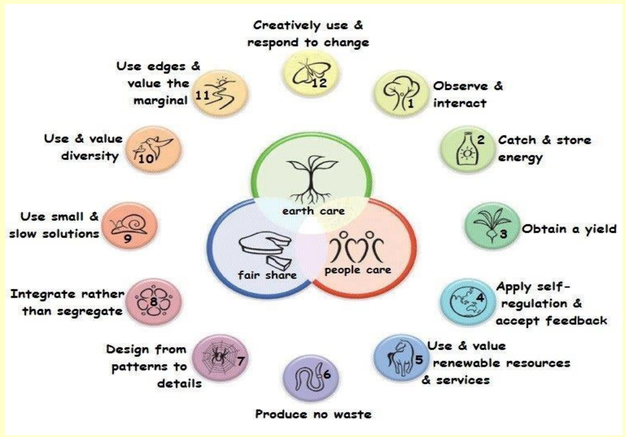
is implemented through a clear and specific design process

promotes the use of locally available, low cost resources and food-based approaches

is accessible, implemented worldwide and provides a potentially cost-effective alternative to conventional nutrition programmes

Permaculture projects are inherently cross sectoral, despite not being expressly designed to improve nutrition

Permaculture Design Principles



Methods

- Twenty purposively selected projects that used both a permaculture design and had a food systems, diet or nutrition objective were contacted using lists of projects from previous calls to the Ag2Nut community of practice and contacts supplied by the Permaculture Association and Networks.
- They were asked to complete a semi-structured electronic questionnaire based on the FAO guiding principles on agriculture programming for nutrition.
- Our assumption is that if the projects are following the FAO guiding principles they were working towards nutrition outcomes- whether these were explicit or implicit.
- This resulted in thirteen case studies from Africa, Asia, Australia and North America, with data analysed qualitatively.

Results

Included Permaculture Projects

Project Name	Start Date	Country
YICE permaculture project	May 2017	Uganda
BEU Permaculture Group	January 2012	Uganda
Brackenology	July 2018	Kenya
Ololo Farm	January 2015	Kenya
Practical Permaculture Institute Zanzibar	January 2016	Tanzania
The Regional Schools and Colleges Permaculture (ReSCOPE) Programme	December 2006	Uganda, Kenya, Malawi, Zambia, Zimbabwe
Never Ending Food	August 2003	Malawi
Himalayan Permaculture Centre	January 2010	Nepal
Aranya Permaculture India Project	November 2015	India
Organic Agriculture and natural regeneration	November 1990	India
Green Shoots Foundation Agri-Tech Centre	December 2018	Cambodia
Permaculture School Gardens;	July 2008	Timor-Leste
Marine Permaculture to Regenerate Ocean Productivity, Food Security and Marine Ecosystems	January 2014	USA, Philippines , Australia

Activities included in the projects

Does the project.....	Number of projects
any activities to improve livelihoods or incomes of participants? Y/N	13
a focus on women's income? Y/N	5
manage natural resources for improved productivity, resilience to shocks or adaptation to climate change? Y/N	13
improve equitable access to natural resources? Y/N	9
improve diversity of crops or livestock? Y/N	13
empower women through labour saving devices, time saving, access to education or other activities? Y/N	8
include nutrition education or health education? Y/N	10
reduce post-harvest losses or improve processing? Y/N	12
aim to improve the nutritional quality of food grown by farmers in the project using any recommended farming practices or post-harvest techniques? Y/N	12
increase market access or value chains for food? Y/N	10
reduce seasonal food insecurity? Y/N	11
improve policy supportive to sustainable food systems, diets or nutrition? Y/N	8
build capacity in ministries at national, district or local levels, for sustainable food systems, diets or nutrition? Y/N	10
communicate or advocate for sustainable food systems, diets or nutrition? Y/N	13

Empowering women – an example from Nepal

- **Himalayan Permaculture Centre; Women's time saving**
  - Use of relative proximity of fodder to livestock; water to the homestead
  - Use of mulch reducing the need to weed and water, thus building fertility and saving time.
  - energy efficient stoves reduce labour and firewood use.
  - Time saved for preparing special meals for children and hygiene practices (amongst others)

The permaculture project evaluation contains several features relevant to nutrition improvement:

- training and capacity development;
- community building;
- targeting of vulnerable populations;
- agroecological production
- use of biological and local resources, and avoidance of fossil fuels;
- school programmes, with hands-on teaching of organic horticulture, nutrition and health;
- gender empowerment and youth focus;
- behaviour change communication for nutrition and health;
- diversified livelihood promotion;
- energy efficient post-harvest handling and processing for nutrition quality;
- and advocacy for sustainable diets.

Conclusions

Immense potential for Permaculture to support multi-sectoral activities and effectively improve sustainable food systems, diets and nutrition.

Training – Permaculture Design Courses to be encouraged for Development workers

Multi-sectoral nutrition- evaluations are needed with simple tools to assess impact

Photos from the Himalayan Permaculture Centre: Credit Anne-Marie Mayer