THE LICABEÑOS' AGRITOURISM FARM

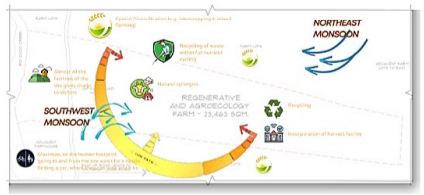
A Transformation of Intensive Industrial Agriculture to a Diversified Regenerative Agroecological Approach in the Development of Resilient Food Systems

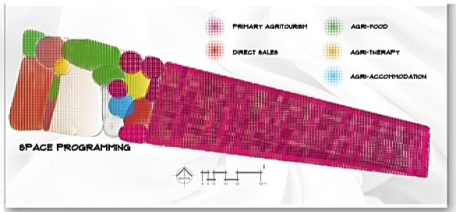
The design of the regenerative agriculture and agroecological farm intends to have a sustainable production of agricultural products by implementing natural methods of farming, processing and producing that does not use harmful synthetic chemicals. The visionary long-term goal for this large-scale green project provides fertility and productivity – promoting higher biodiversity, benefitting species and living soils. The fundamental purpose of the design study is to produce our food with nature, not against it (i.e. industrial farming and monoculture).

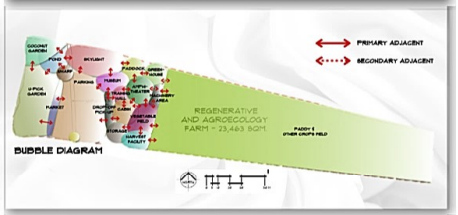
The planning of the site allocates mainly the paddy field and the different gardens in order to address the prime practice of farming – agroecology. The secondary focus allocates educational functions within the site which have been incorporated in the form of museum, training hall, amphitheater and the fields of practice – vegetable and paddy (rice and corn). The market, adjacent to the fruit tree garden provides the social and site economic functions.

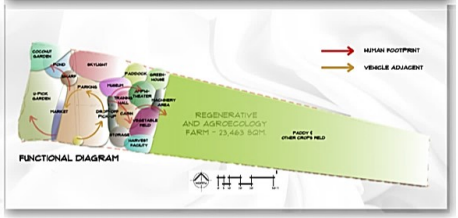
SITE INVENTORY

SITE ANALYSIS





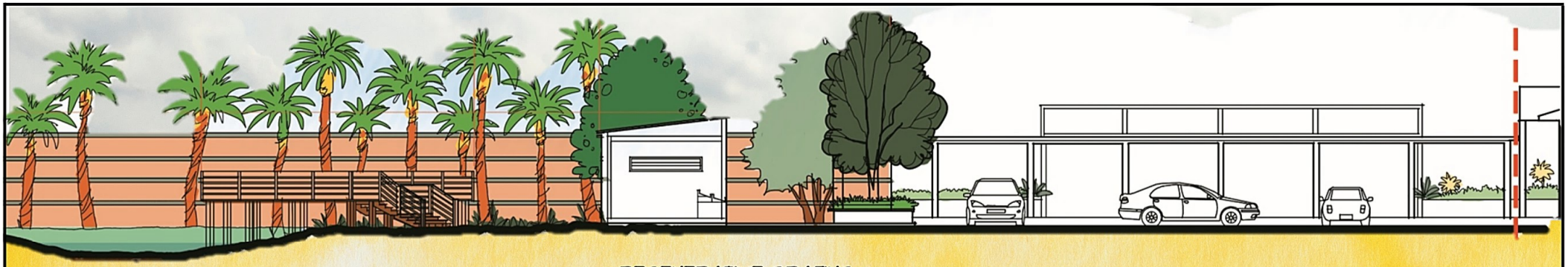




PROXIMITY MATRIX

Total Area of 23,463 sqm. (developed farm area including gardens essential in regenerative and agroecology: 8,313 sqm. & paddy field: 15,150 sqm.)

SITE DEVELOPMENT PLAN



REGENERATIVE GRAZING

Regenerative grazing is a principle-driven agricultural practice of building soil health by managing livestock on perennial and annual forages, and in a way that supports human and ecosystem health, farm profitability, and community and food system resilience.

The ducks and chickens eat grass and bugs and fertilize the soil with manure. When the grass has been eaten down to the ground, the root systems underneath release carbon, adding fertility back into the land. After another 5-6 weeks, the original grazing area has completely regrown, and the cycle begins again.

https://organicfarmermag.com/2020/03/organic-poultry-production-for-meat-and-eggs/

AGROFORESTRY

When designed with diverse species and managed well, agroforestry systems can be a good source of livelihood and help farmers adapt to climate change.

Establishing agroforestry systems with a good choice of species can help farmers increase their yields through growing cash crops as primary sources of food and income, perennial crops and fruit trees as secondary sources, and timber for long-term income.

https://www.nal.usda.gov/legacy/afsic/agroforestry

COVER CROPS

Green manure is a ground-covering mulch and soil amendment created by leaving old roots and plant debris on the ground to dry and then incorporating it into the top level of the soil. Centrosema Pubescens Benth. and Calopogonium Mucunoides Desv. are chosen for this job, as aside from they are the common cover crops in the province, they also grow well in nutrient-poor soils and can be intercropped with grasses, and their leaves are used as a cheap source of protein, calcium, and potassium. These cover crops also provide soil protection against erosion, reduce soil temperature, improve soil fertility, and control weeds.

https://keyserver.lucidcentral.org/weeds/data/media/Html/calopogonium_mucunoides.htm

INTERCROPPING

The intercropping practice combines both trap and repellent plants for the sake of the cash crop. While trap species attract (or pull) pests, repellant ones push them away. A pattern to illustrate this technique in this study is growing Napier grass (to pull) and Desmodium legume (to push) in order to protect corn from stem boring corn larvae.

https://eos.com/blog/intercropping/#:~:text=An%20example%20of%20a%20perennial,flowering%20or%20ready%20for%20harvesting

NO-TILL FARMING

No-till farming of Cucumis melo var. cantalupensis increases the amount of water that infiltrates into the soil, organic matter retention and cycling of nutrients. It can reduce or eliminate soil erosion. Done in conjunction with cover crops, it increases the amount and variety of microbial life in the soil, which makes soils more resilient and full of nutrients.

https://hvfarmhub.org/growing-no-till-melons/

INTERIOR LANDSCAPE

2

TRAINING HALL, CABIN, DROP-OFF/PICK-UP, STORAGE

3

TRAINING HALL, AMPHITHEATER, GREENHOUSES, PADDY FIELD

4

MARKET, MUSEUM, PARKING AREA