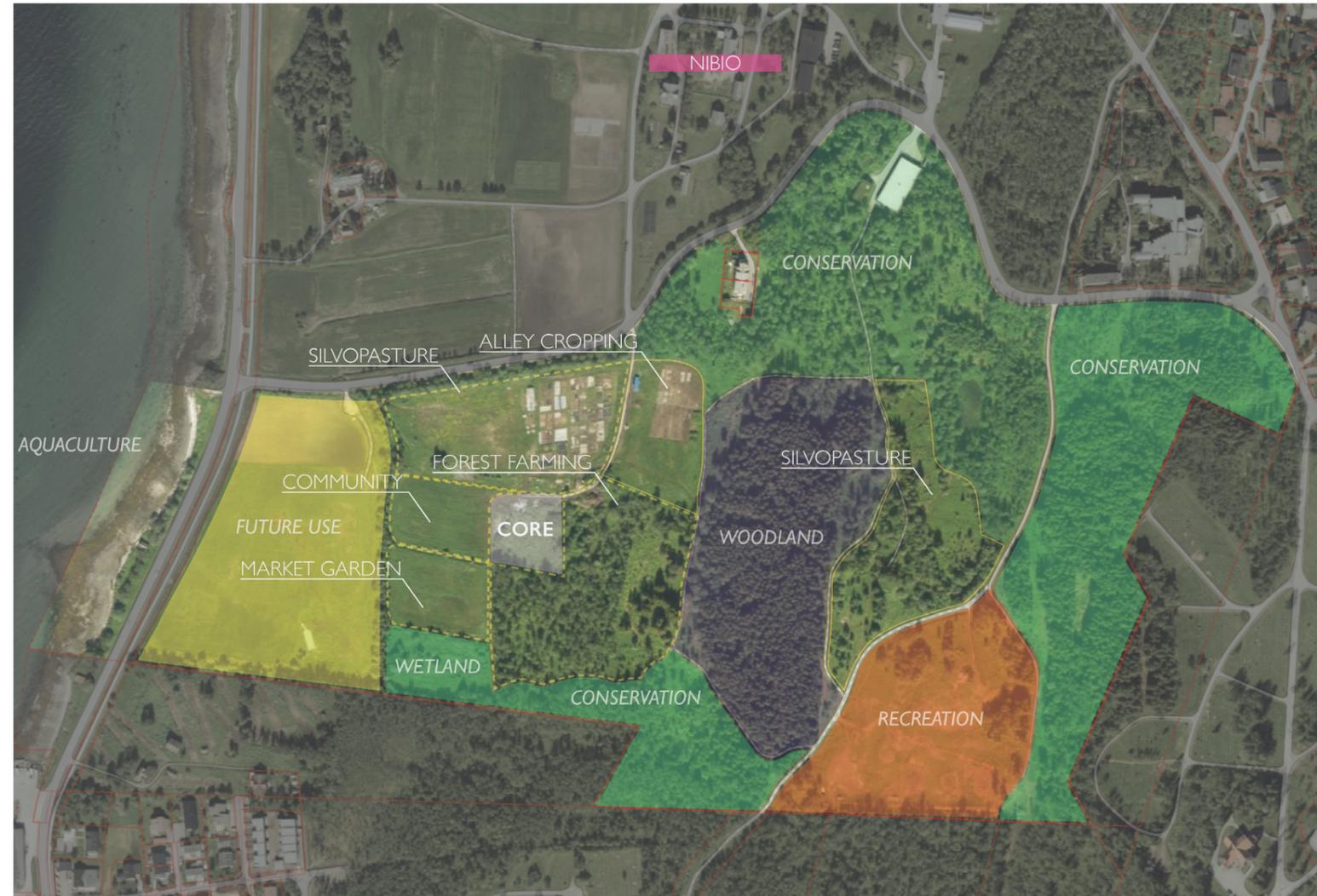


HOLT ECOPARK | AGROFORESTRY SUITABILITY STUDY

This is an excerpt from a report by Tim Tensen and Andrew Kilduff of Terra Genesis International (formerly of TK.designlab) and Øystein Kristiansen, independent mapper and consultant (formerly of Holt læringstun). [Link to the summary report here](#). For more information, contact tensen@terra-genesis.com or oyskristiansen@protonmail.com.



Agroforestry at 69° North



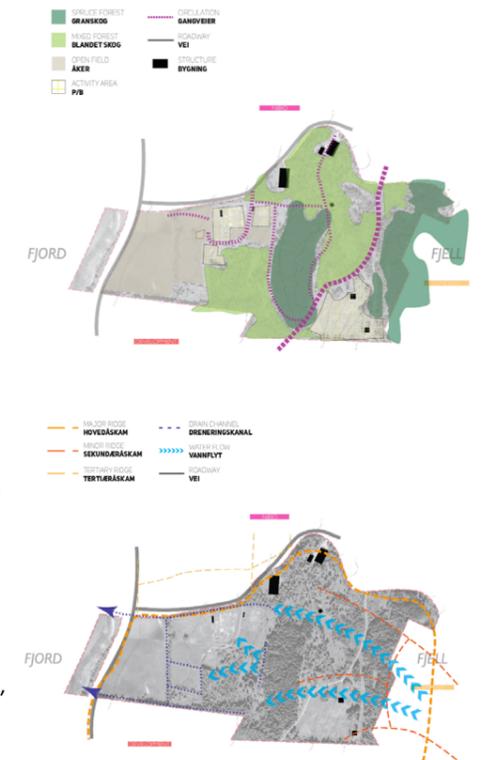
In 2019 Holt læringstun, a foundation located on the island of Tromsø, northern Norway, commissioned an agroforestry suitability study as part of the planning process for a community centered ecopark.

Annual rainfall	1.031 mm
Driest month (5)	41 mm
Driest recorded (2)	1.6 mm (2018)
Wettest month (10)	118 mm
Wettest recorded (10)	314.6 mm (1985)
Average temp	2.2 °C
Warmest mnth (7)	11.6 °C
Coldest mnth (1/2)	-4.7 °C
Highest recorded	30.2 °C (1972)
Lowest recorded	-18.4 °C (1966)
Sun hours p.y.	1.600-2.000
Max solar angle	45°
Cloud days p.y.	173 (48%)
Growing days	140
Day-degrees	612

Warm Summer Continental/Hemiboreal (Dfb)

Agroforestry was proposed as a possible strategy to increase resilience and maintain biodiversity, two crucial intentions of the ecopark. It was also highlighted as a suitable framework to facilitate nature learning and ecosystem literacy, which is the main purpose of the foundation.

The suitability study was mostly dedicated to present agroforestry as a concept to the foundation and its stakeholders, and as a future-oriented framework where cyclical and synergetic relationships between plants, animals, landscape, and people can be tested and developed with a high degree of citizen participation.



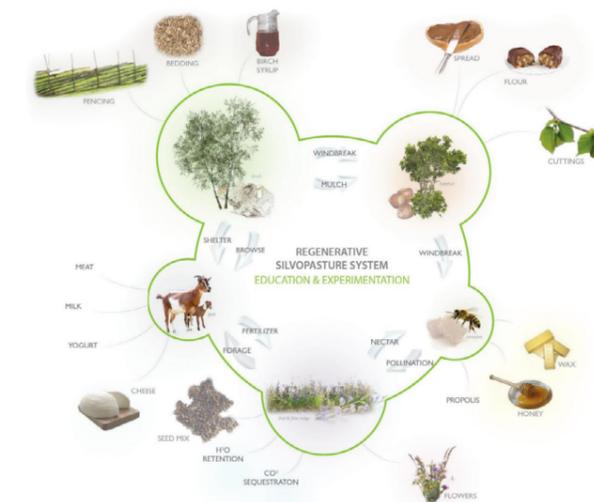
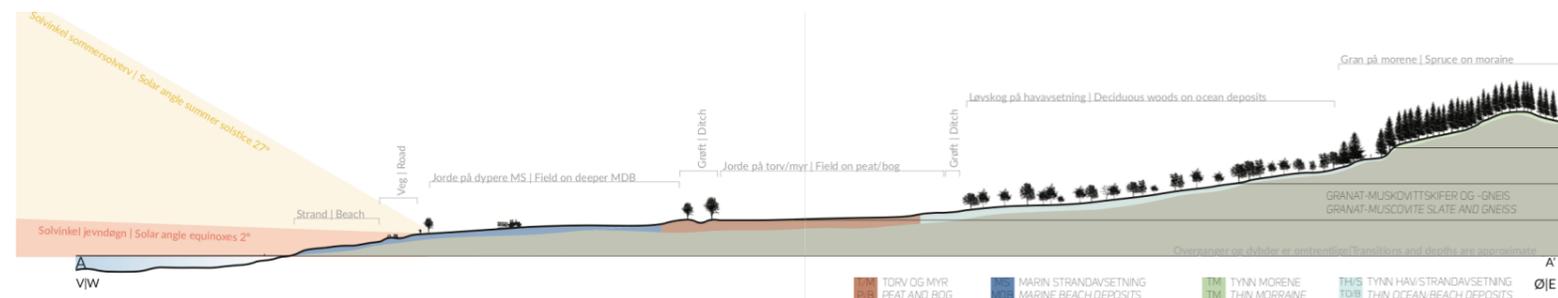
The ecopark concept comprises an area of approximately 25 ha of mixed woodland and former pastures on land managed by the agricultural research institute NIBIO.

A community garden was established in 2016 as a social initiative and effort to preserve the

property as green space on the island, at a prime location where developers have been wanting to build housing.

Roughly 300 people are involved with the community garden, and several schools and social organisations are actively involved

with the gardens and other activities throughout the year. The growing season is short (jun-sep), but intense with a relatively mild climate and two months of midnight sun. Future projections for Tromsø are similar to the rest of the Arctic, with rapid increase in temperatures, and more precipitation, especially as rain.



Particular design challenges include a complex network of stakeholders and funders, shallow, poorly draining, and saturated soils, low solar angles, and a limited number of appropriate plants and animals to integrate. Preconceived ideas is also a challenge, but there is a general openness to experimentation and community involvement, which are invaluable resources. As of November 2020, a master plan is being developed, and we hope that parts of the agroforestry study will be incorporated and begun implemented in 2021 or 2022.