Alkalmazott rendeszeranalízis a gyakorlatban

avagy

"Science without policy is science but policy without science is gambling"

- Professor David Grey

APPLIED SYSTEMS ANALYSIS IN BEST PRACTICE: forestry with agriculture projects

Permanent climate change mitigation can be achieved with co-production of food, feed, fiber and fuel for future generations

- **Hazelnut plantations** are suited for **combined food-feed-fibre-fuel** production, ensuring that human and livestock requirements can be met without using any land with high biodiversity, protected and forested ecosystems.
- The case study demonstrated **NET positive environmental impacts** on soil, water, biodiversity and climate, halting and reversing degradation and indicate significant potential of hazelnut plantations.
- The application of **carbon financial mechanisms** on combined forestry with agriculture plantations proved to be suitable for establishment on abandoned but potentially highly productive lands.
- **Measurable impact of training** on halting land degradation.
- Sustainable food production can be achieved on carbon plantations, with significant co-benefits on **livelihood improvement** and rural development.
- As a conclusion, afforestation can provide substantial additional land for agricultural commodities production to meet the food and fiber **requirements of future generations**.

Transition Project
Land-Use & Forests

CEP
The Climate and Education

FERRERO

AGRIGEORGIA
ავრიჯორჯია

Ministry of Environment Protection of Georgia

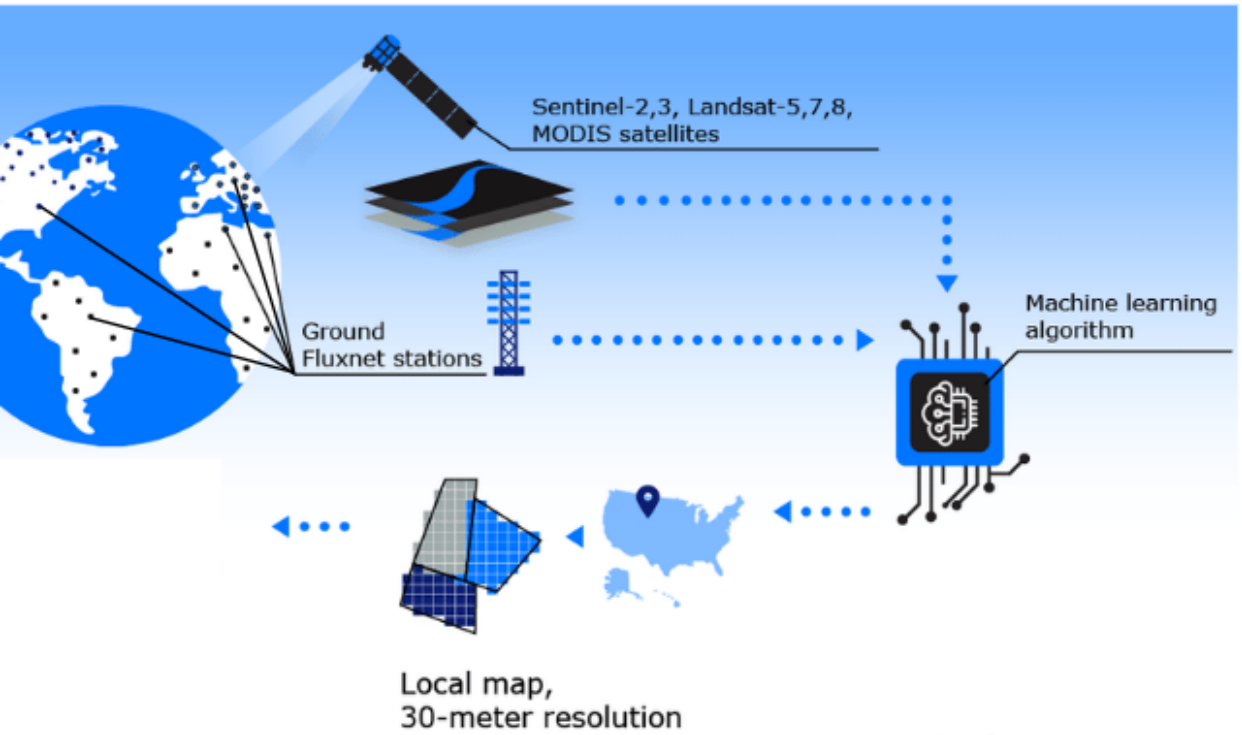
TÜV SÜD

The afforestation with hazelnut plantation projects represents a replicable model for the efficient use of abandoned by low-input food-fiber plantations

Source: IIASA GAEZ assessment (download 2012): http://www.gaez.iiasa.ac.at/
Project Design Documentation of the Afforestation with Hazelnut Plantations in Western Georgia: www.climateprojects.info/HAP

Carbon Space

UNIQUE TECHNOLOGY MEETS APPLIED SYSTEMS ANALYSIS



Bottom-up approach

The unique tech approach combines top down and bottom up approaches to achieve accuracy.

Multispectral satellite imagery from the ESA and NASA satellites and CO2 flux data from the ground eddy covariance stations (Fluxnet).

As a result, the Net Ecosystem Exchange (NEE), which is a measure of the net exchange of CO2 between the ecosystem and the atmosphere, is calculated.
NEE is relevant for biodiversity.

The accuracy is regularly validated against ground stations, which did not participate in the training.

Biochar: the 'black gold' for soils that is getting big bets on offset markets