Neste strives to set global standards to novel oils cultivation methods. 2 fold standards are the starting point to consider them “novel”

**Novel Vegetable Oils**

**Additional biomass**
NVOs are cultivated by following low-ILUC principle that avoids displacement of food production

**Minimum environmental impact**
In NVO farming we strive to maximize GHG savings and carbon sequestration
Novel vegetable oils strategic concepts

Objective

Fulfilling increasing demand for sustainable raw materials while not competing with food production and achieving carbon neutrality

Strategic pillars

- **Annuals in marginal lands or intermediate cropping**
  - Crops: Carinata, Camelina, Rapeseed, Safflower, Canola

- **Perennials in reforestation or silvopasture**
  - Trees: Macauba, Pongamia

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NVO pilot concepts aim to set global standards adapted to local conditions

Sustainability, Profitability, Scalability are key criteria

Traceability from origin is key to ensure compliance

1. Cultivation in marginal lands
   - Spain

2. Perennials
   - India

3. Intermediate crops
   - Europe

4. Regenerative Soybean
   - US

NVO pilots in different geographies are test-cases to prove global standards apply while also local conditions are considered

Farmers → Developers → Crushers
Cultivation on marginal lands in Spain

NVO concepts target drought stricken rice growing area that results in unutilized fields

**Former situation**
- Wet rice production and regular winter flooding.
- Monoculture of rice

**Current situation**
- Increasing number of droughts leads to underutilized fields and high salinity soils

**NVO Proposal**
- Drought and salinity adapted oil crops under low input intensity farming to produce feedstocks with low carbon intensity

**Three key sustainability advantages of NVOs**
- Improving habitat (pollinators)
- An alternative of income to rice farmers
- Reduce soil salinity and improve soil health
Intermediate crops in the EU

NVO concepts provide additional income for farmers as harvestable cover crops

Former situation
2010: 5.3 million ha of cover crops
2016: 7.4 million ha of cover crops

Current situation
Farmers are encouraged and sometimes mandated to have cover crops on their fields.

NVO Proposal
Identify cover crops that complete their cycle and allow for grain harvest.

Three key sustainability advantages of NVOs

- Promote cover crop adoption
- Additional profit to farmers
- Low GHG feedstock

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NVO’s global evolutionary standards
Agriculture Beyond Carbon Neutrality

**Today - 5 Years**
- Carbon neutral feedstocks

**5 - 10 Years**
- Carbon neutral feedstocks
- Soil C sequestration
- Improve soil health
- Improve biodiversity
- Low ILUC risk

**10+ Years**
- Carbon neutral feedstocks
- Forest C storage
- Soil C sequestration
- Improve soil health
- Improve biodiversity
- Low ILUC risk

**Perennial NVOs**

**Annual NVOs**

**Regenerative Ag practices**
Thank you

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