

What about soil?

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Kekkilä-BVB

Care for life.

Our company

- We manufacture growing media in other words; Potting Soil
- Kekkilä-BVB is the European leader in horticulture.
- We provide products and services for professional greenhouse growers, consumers and landscapers to over 100 countries worldwide.

Mission

Creating green growth

Vision

Growing together for a better future

Values guide us

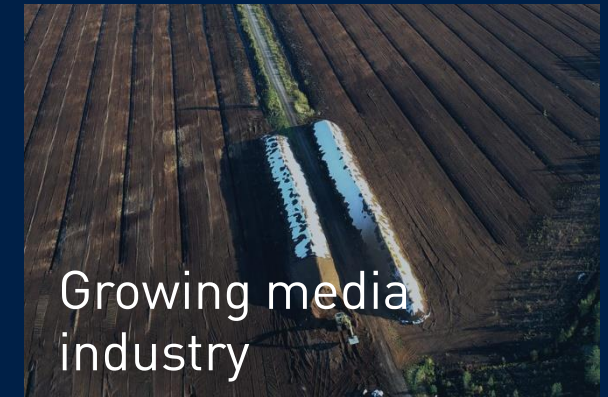
Focus on customer success

Achieving together

Courage to renew

Trust through respect

Our customers



Our locations

360M+

Euros in net sales

12

Production facilities

4,5M

Volume of our growing
media in m3

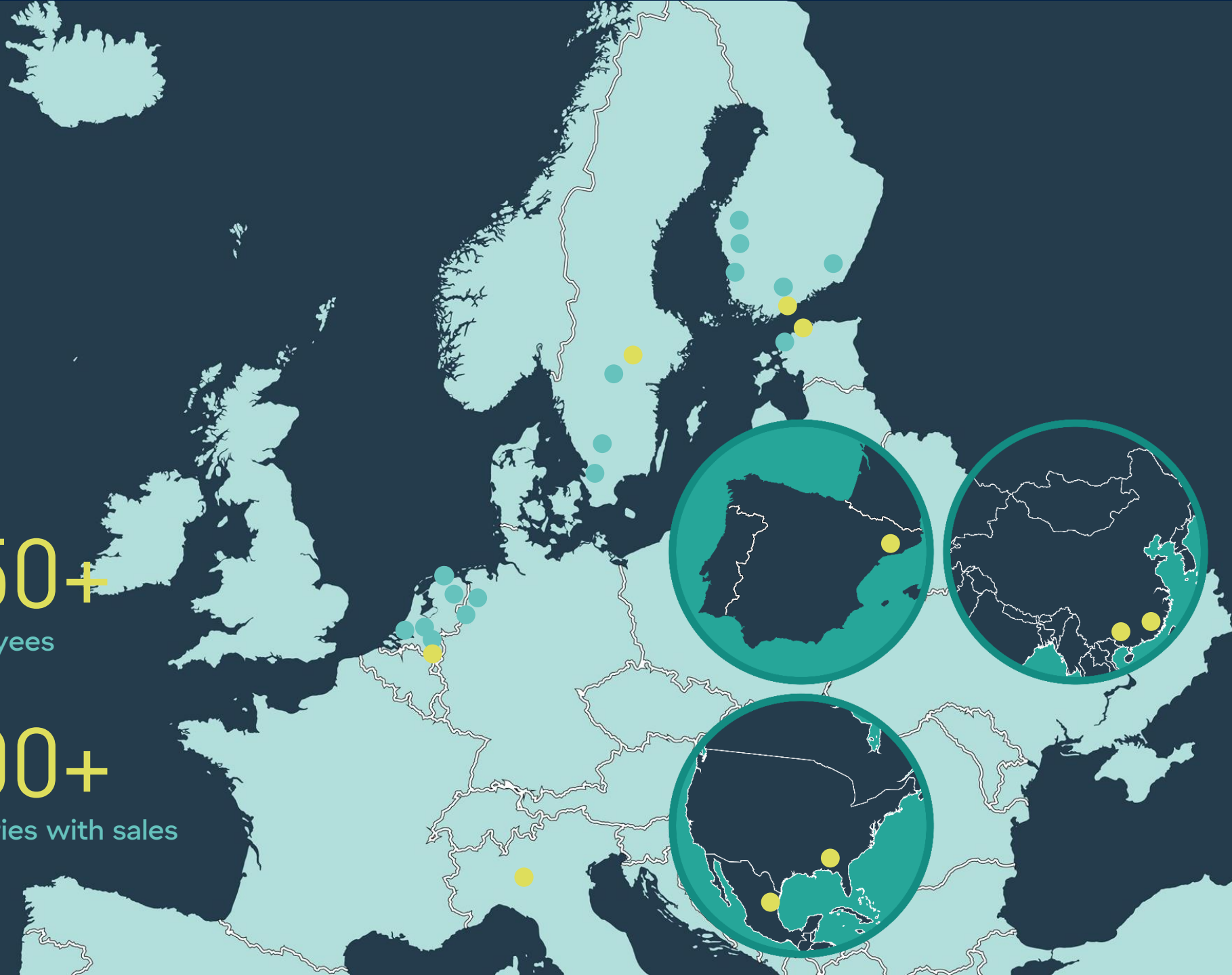
- Production & sales
- Sales

650+

Employees

100+

Countries with sales



What is potting soil made off?

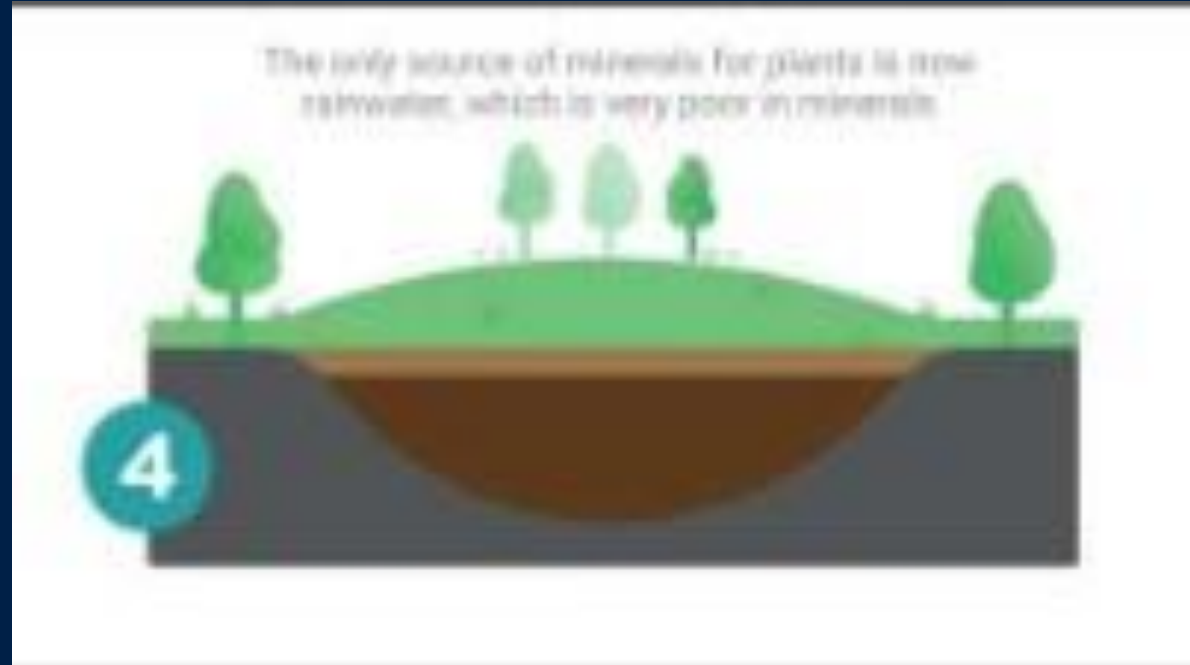
- Coir (peat, chips, fiber)
- Compost
- perlite
- Woodfiber
- BVB Accretio
- Bark
- Rice husk
- Steenwol / foam
- Sand /clay
- Peat
- Pumice stone
- GFT (Vegetable, fruit, garden)
- Grass fiber
- Digestate (vergiste biomassa)
- Miscanthus / hemp
- Re-used substrate
- Processed manure (organic material)

Most used growing media constituent

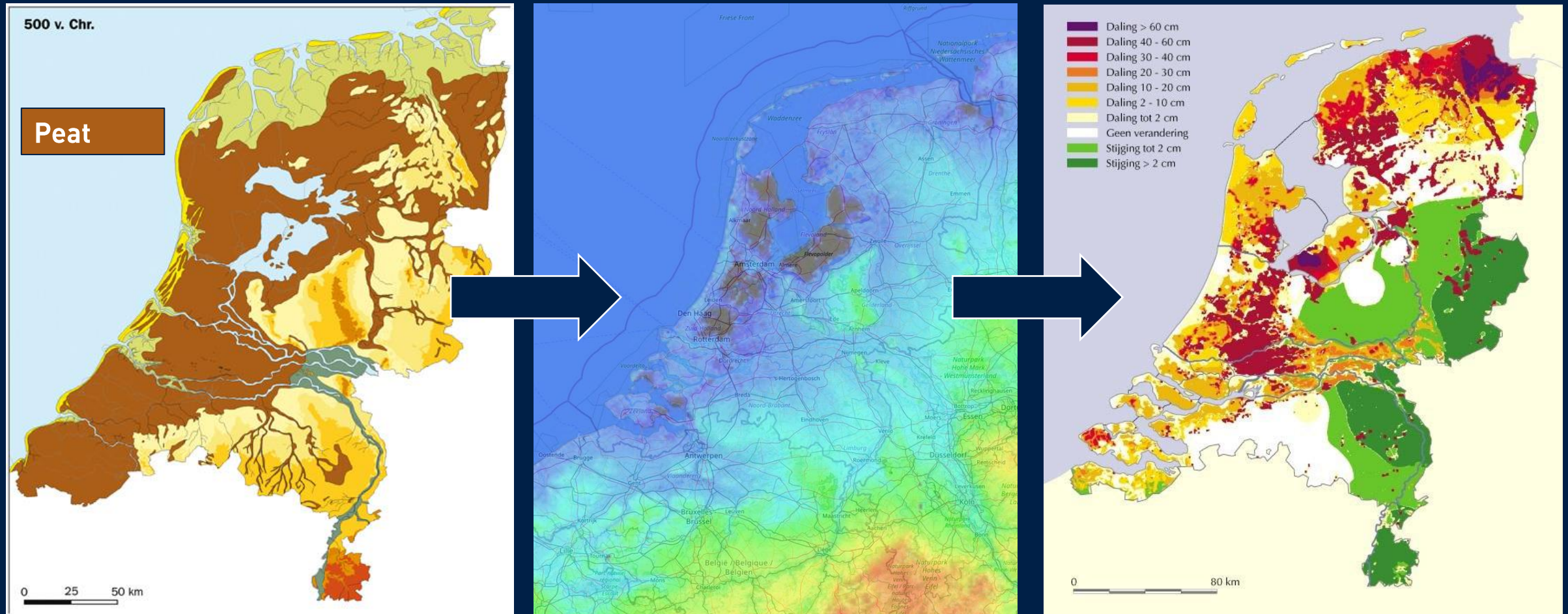
Peat

Where does it come from?

- Deposition of organic matter
- Surface Elevation
- Natural succession
- Groundwater ↔ Rainwater
- End of succession (raised bog)
- Development of raised bog
- Peat

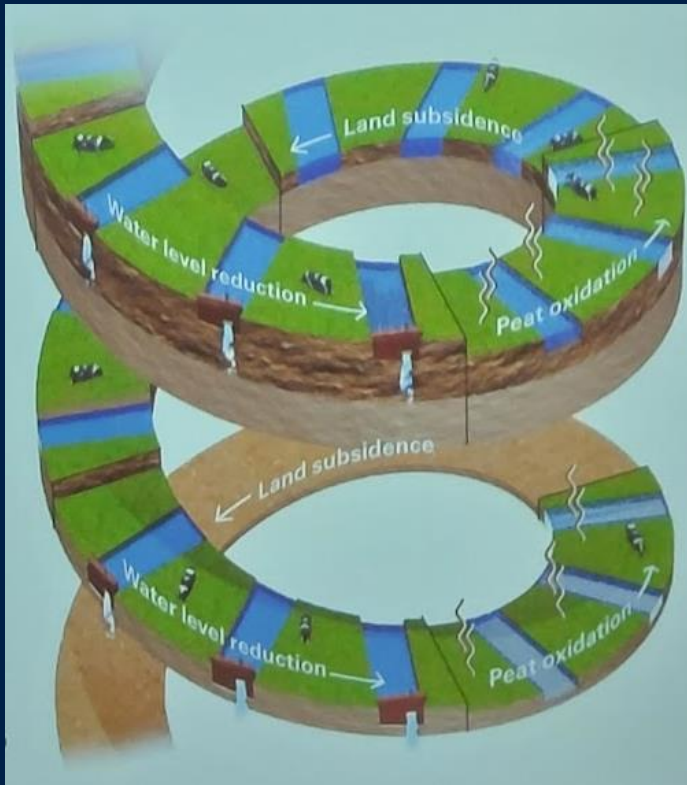


Peat in the Netherlands.

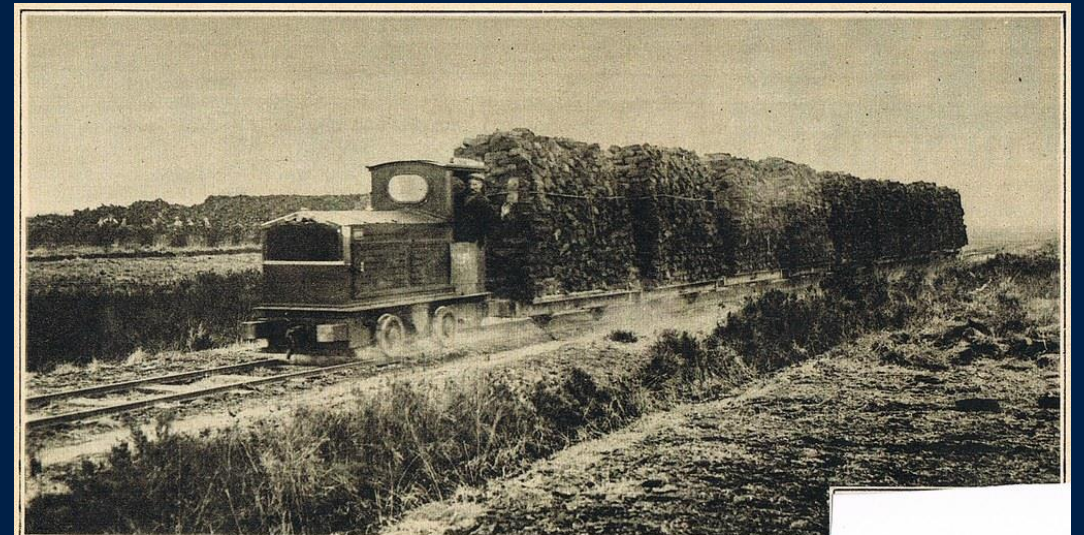


Where did this peat go to?

- Mainly into the air as CO₂, through peat oxidation
- 7% of anthropical emissions (aviation = 2%)
- Soil subsidence



But also peat extraction

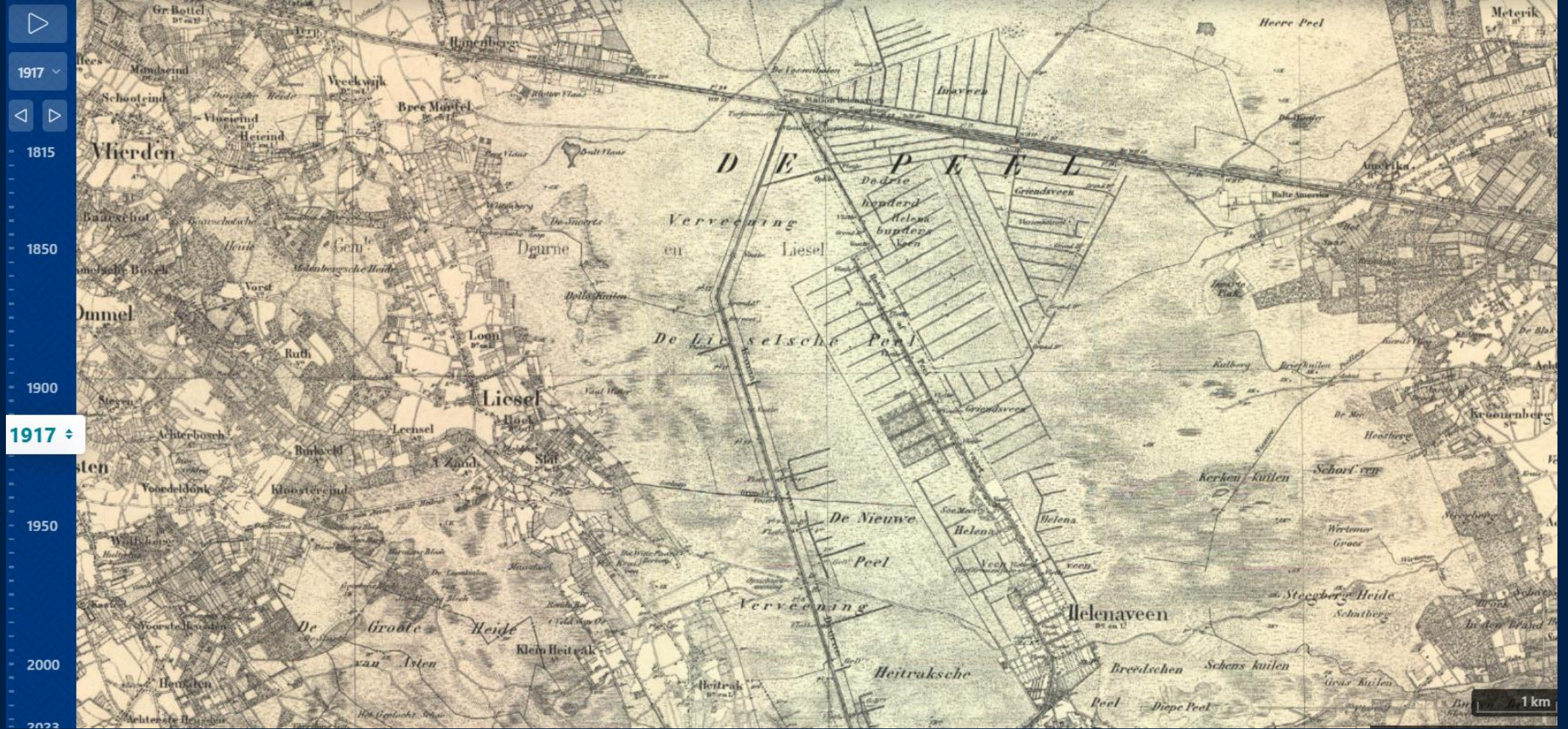


Turf-ontginning in de Peel. Per smalspoor wordt de brandstof vanuit het binnenland naar trein en boot vervoerd.

Example: De Peel



Example: De Peel



De Peel today



Why is important to find alternatives to peat?

- Impact on landscape
- Impact on water flows and surface water quality
- Biodiversity loss
- CO2 emissions (7% of total anthropological emissions)
- To protect worlds largest land based carbon sink with 44% of total land based carbon on only 3% of the surface.

Why is it hard to find suitable alternatives to peat?

- Peat is abundant, peat is clean, peat has excellent substrate properties
- Lack sufficient supply
- Alternative materials need to be shipped from far
- Alternative materials need to be farmed; which also take up a lot of space; displaces nature and other crops.
- Alternative materials lack stability, water holding capacity, or chemical characteristics or require elaborate treatment.
- Alternative materials can only be applied for a small percentage or can compromise crop growth.
- Alternative materials can result in more challenging cultivation of crops with more water use, more fertilizer use or more pesticide use.

- Peat plays an essential part in our food supply.

What can be done?

- Peatland rewetting, prevent peat oxidation
- Restore Sphagnum cover, prevent methane and nitrous oxide emissions
- Sphagnum moss is world's most important none vascular plant.
- Sphagnum moss creates a unique environment
- Sphagnum has unique properties; low pH, low EC high moisture retention.
- Sphagnum can be seen as an aquatic plant adapted to live on land, creating its own water "bubble".
- Peat derives all of its qualities from sphagnum.

Sphagnum farming as alternative to "fossil" peat?



03

What developments
are currently taking
place?

Care for life.

Social developments & Legislation in our sector

Media reporting on peat-ban for the professional Horticulture sector

Defra Press Office, 24 March 2023 - [Weekly stories](#)

There has been news reporting of our ban on [horticultural peat](#). In 2011 we agreed to a voluntary phase out of the sale of peat and peat-containing products by 2020, and repeatedly stated that we would legislate if this was not successful. While progress was made, the industry transition has been too slow. Therefore, in August 2022, [we announced a ban](#) on the sale of peat and peat-containing products in the retail horticultural sector by 2024.

The retail sector accounts for 70% of peat sold in the UK. The professional sector also utilises peat to grow some food products and plants ranging from oaks to rarer species. There are already many peat alternatives on the market including bark, coir, bracken which have been well adopted in the amateur sector. Defra has jointly funded research with the industry on peat replacements in professional horticulture, the results of which are promising. Indeed sectors such as strawberries and other soft fruit growers have already transitioned away from peat-based growing media.



Whoever has been working in the garden, has certainly used such a bag of potting soil.

Future of European peatlands discussed in Dublin

 [Rubina Freiberg](#)
May 8, 2023 7:00 pm



German stakeholders divided over EU's new peatland targets

By Julia Dahm | Euractiv.de | translated by Daniel Eck ⌚ Est. 4min 📅 Jul 15, 2022 (updated: 📅 Jul 18, 2022)



Dutch have no plans to be peat-free until at least after 2050

As England looks at banning commercial and retail use of peat at dates from 2024, most European nations including the Netherlands have no plans to end peat use.

Responsibly Produced Peat covenant of the Netherlands (RPP)

- Motion in the House of Representatives
- Covenant of different parties
- Signed by:
 - Group of producers
 - Knowledge organizations
 - NGO's (Non-Governmental Organizations)
 - VPN (Association of Potting Soil and Substrate manufacturers in the Netherlands)
 - Ministry of Agriculture, Nature and Food Quality (LNV)



Vereniging
**Potgrond- en Substraatfabrikanten
Nederland**



04

Future of substrates

Care for life.

Growing media (peat) are needed to safely and efficiently feed the world

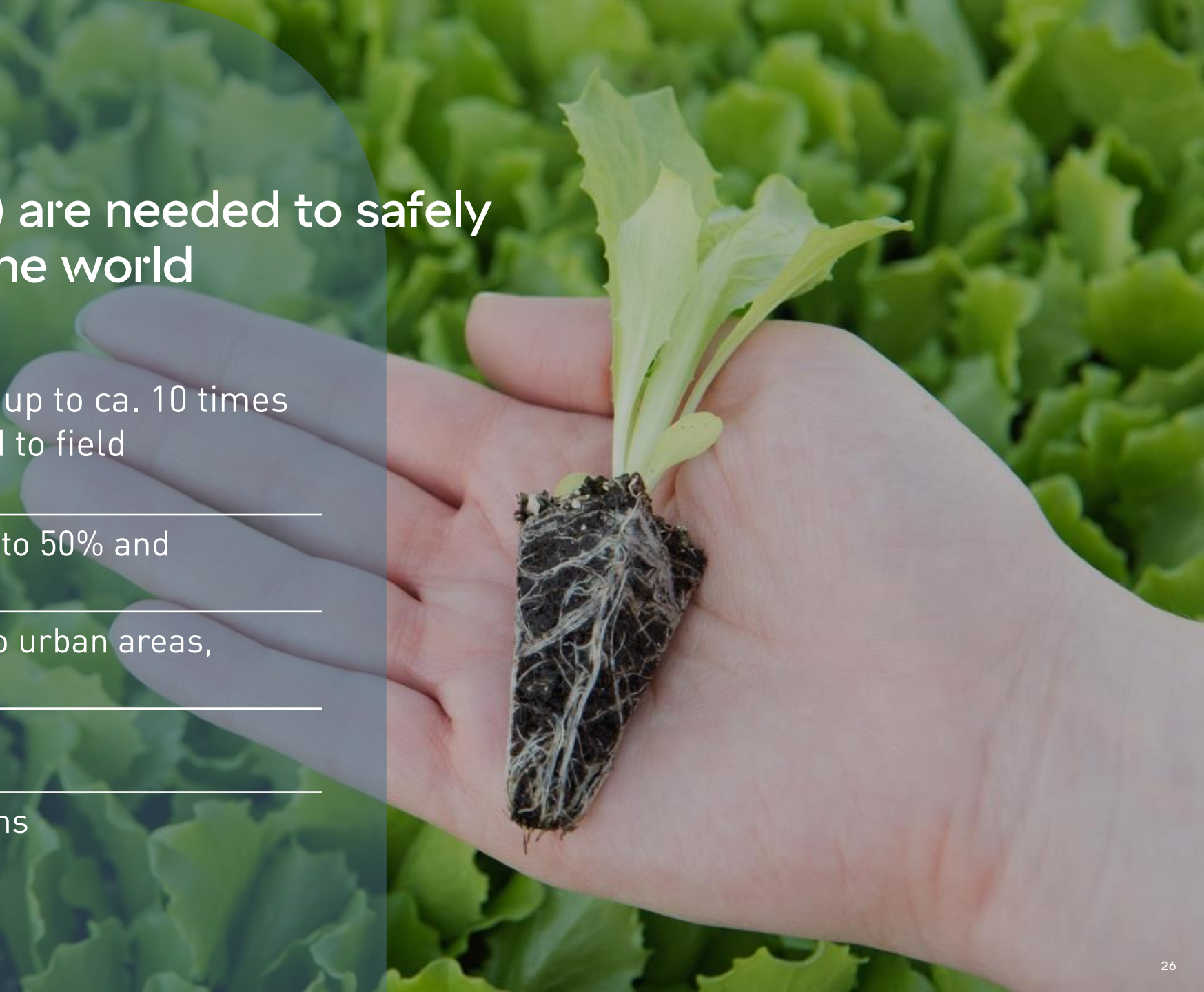
Greenhouse production yields up to ca. 10 times higher per unit area compared to field production

It can reduce water use with up to 50% and fertilizer use with up to 60%

Enable food production closer to urban areas, requiring less transportation

Ensure food safety and hygiene

Provide better working conditions



Global demand for growing media

| | 2017 (Mm3 y-1) | 2050 (Mm3 y-1) | % increase |
|--------------------------|----------------|----------------|------------|
| Peat | 40 | 80 | 100 |
| Coir | 11 | 46 | 318 |
| Wood fibre | 3 | 30 | 900 |
| Bark | 2 | 10 | 400 |
| Compost | 1 | 5 | 400 |
| Perlite | 1.5 | 10 | 567 |
| Stone wool | 0.9 | 4 | 344 |
| Pumice stone, lava, clay | 8 | 33 | 313 |
| New | 0 | 65 | |
| Total | 67 | 283 | 322 |

Most important:

- We need all the materials we can find.
- We can't do it without the currently known materials until we have found substitutes.
- Only when the entire chain collaborates can we deploy new materials in a safe responsible and effective manner.

05

Life cycle analysis

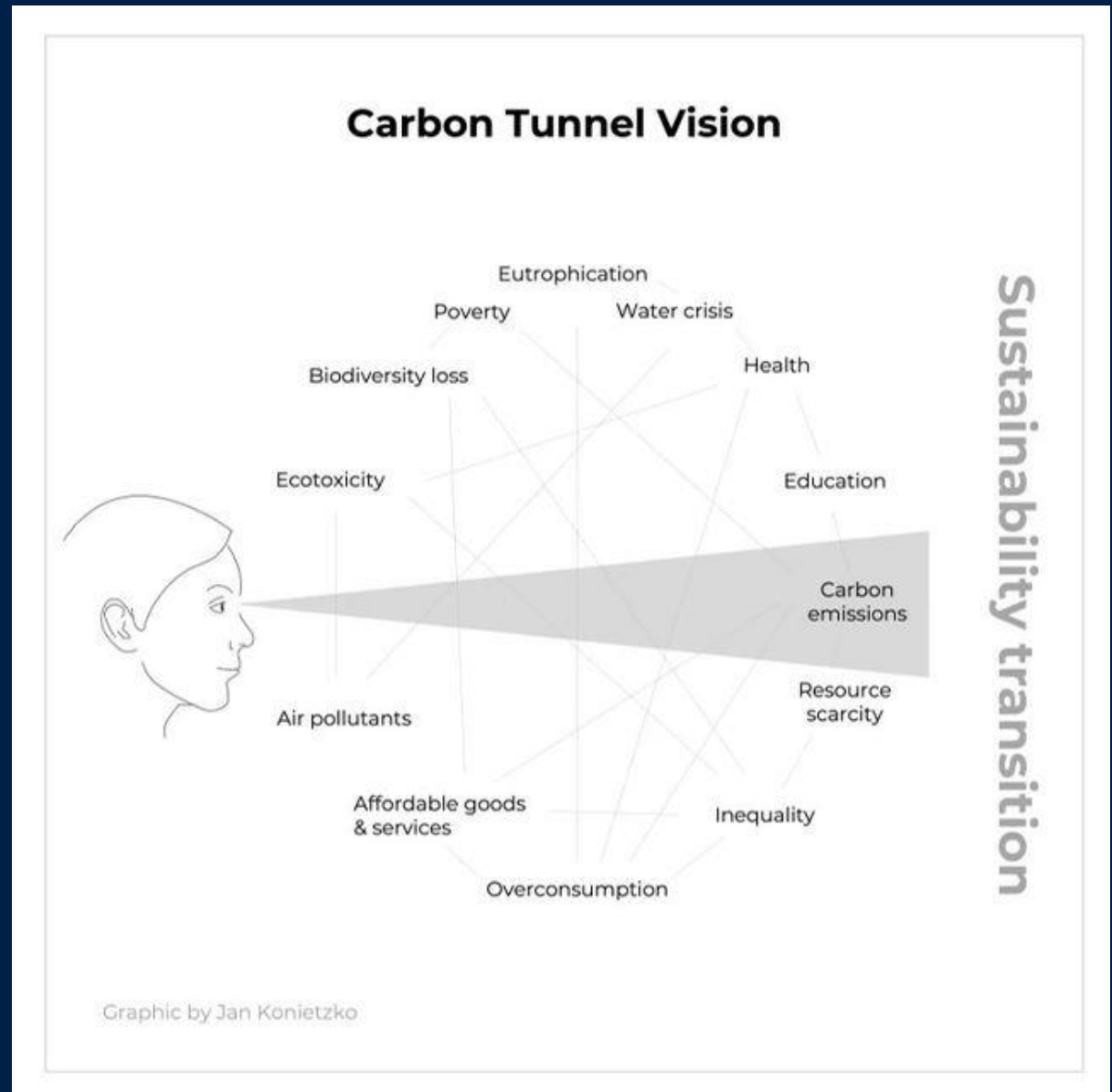
Care for life.

CO2 tunnel vision

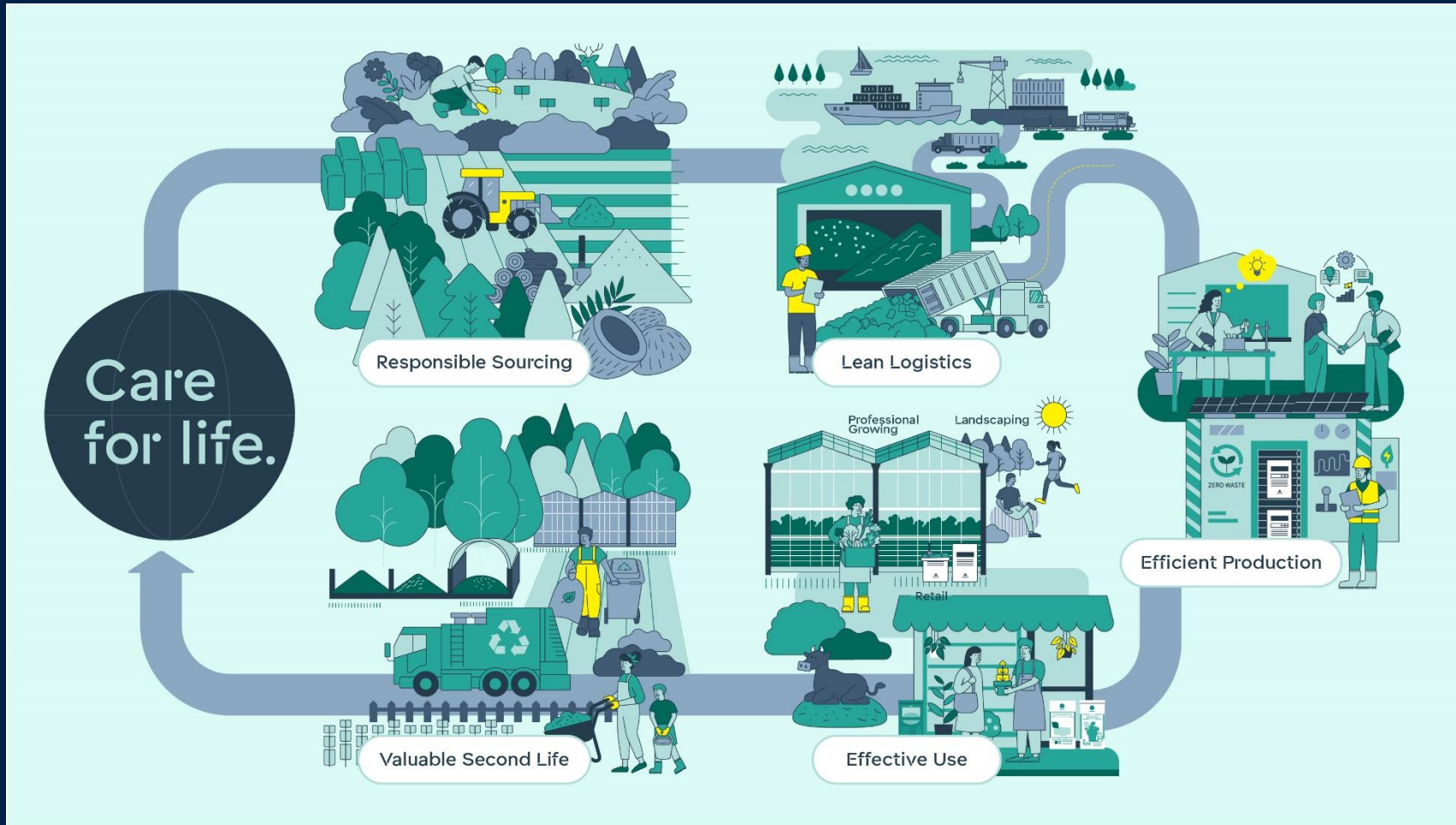
For example: Not only do we have to transport coconut from Asia, but we also need to reduce the salt content (EC) of the coconut by rinsing it with water.en LCA

Question: how much liter water do we need to reduce the salt content of 1 m3 kokos?

1 M3 = 6000 liter of water



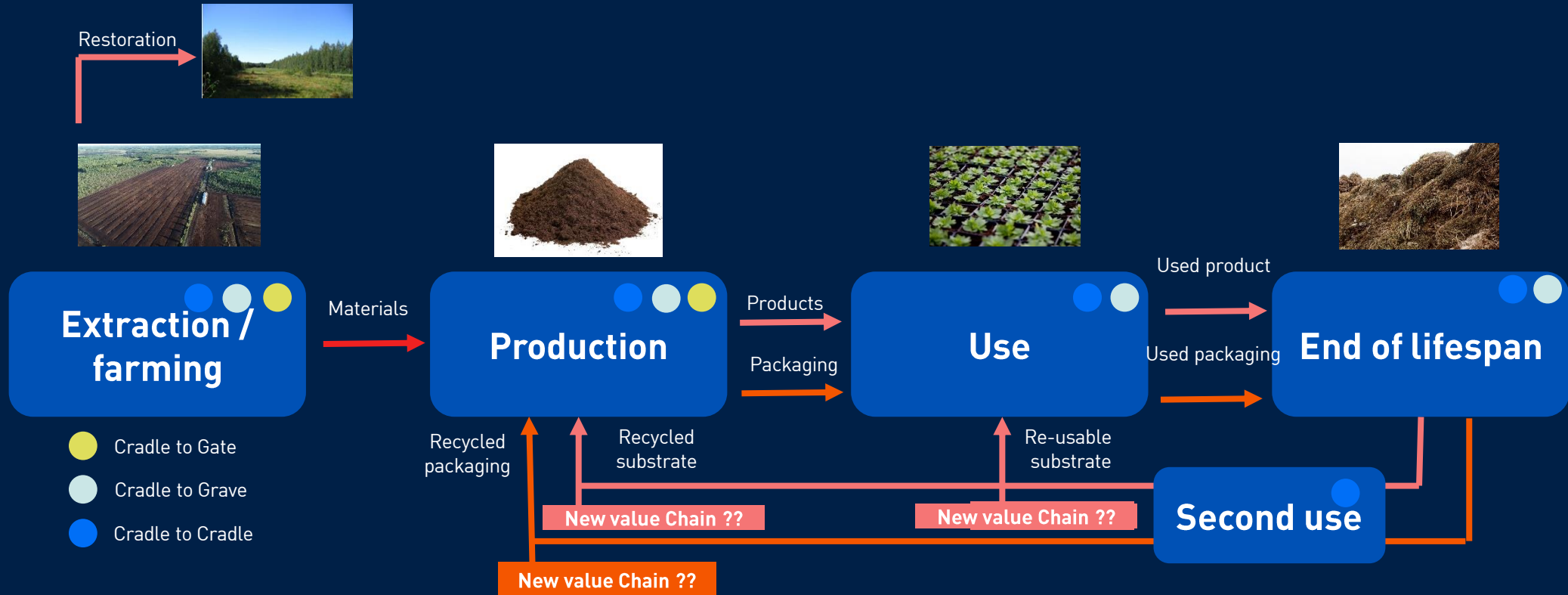
Only when we include the entire supply chain can we be as sustainable as possible



Key aspects:

- Responsible sourcing
- Lean logistics
- Efficient production
- Effective in use
- Valuable second life

The entire chain can be included in life cycle analyses.



For all stages, energy consumption, materials used, emissions to air, water, and soil are taken into account. Transport between each stage is also part of the LCA (Life Cycle Assessment)

Spent Strawberry Substrate



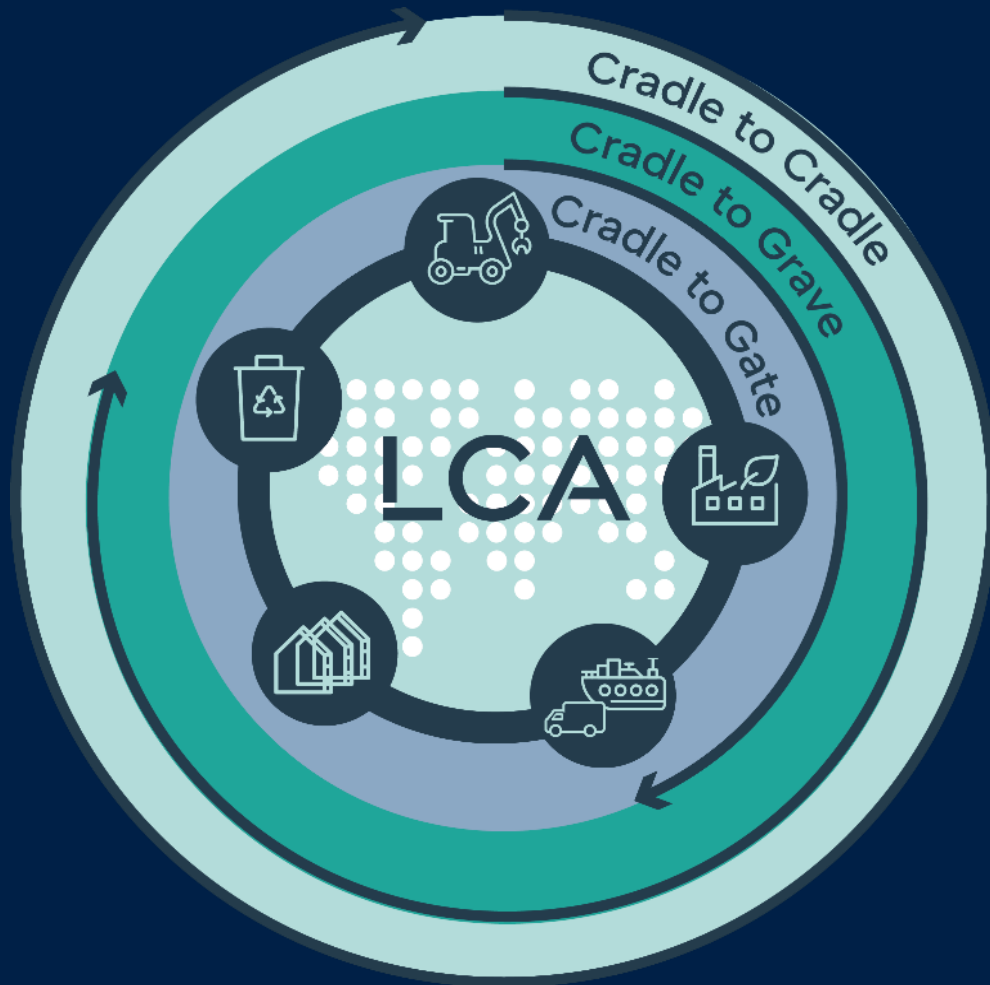
Benefits of using spent strawberry substrate

- Prevents harvesting of new raw materials
- High value use of a premium waste stream
- Contains the excellent buffer properties of peat
- Rewettable properties of coir intact
- Origins of raw materials well-known.

Collaboration with grower

1. Grower uses strawberry substrate, Kekkilä-BVB guarantees take-back
2. Spent strawberry substrate collected at professional grower
3. Substrates processed for reuse, either by composting or hygienisation
4. Premium spent strawberry substrate given a 2nd life in retail soils (20 – 30%)

Lifecycle analyses (LCA) can help us better understand the impact



Benefits for users:

- Improved the decisions
- Development of sustainable products
- Substantiating sustainability claims

Considerations:

- CO2 footprint is not an LCA
- Use the same LCA method
- LCA reveals little about actual performance (At growers or consumer)

It's a useful tool when it is used in the right way

Responsibly Produced Peat (RPP)

In 2025, Kekkilä-BVB aims to have 80% of used peat under RPP certification.

Responsibly Produced Peat certification ensures that peatland will be used, managed and restored in a responsible way. The RPP certification system does not allow peat extraction from high conservation value areas.

It stimulates peat extraction from highly degraded areas followed up by appropriate after-use measures. It also implies leaving all ecological valuable areas, with or without a nature conservation status, undisturbed. Responsibly Produced Peat certification secures the best possible development after completion of peat production, with preference for restoration.

06

Impact for growers

Care for life.

What considerations are there when using less peat?

- Fertilization → EC
- pH-changes
- Physical properties → f.e. water holding capacity
- Stability
- Price
- Shelf life
- Application

- Learning process for the grower



Question for you

Can you grow in a mixture without peat?

Yes

However, take into account:

- More frequent watering
- Higher EC levels
- Changes in analyses
- Adjusting nutrients schedules
- Introducing a wetter chain
- There are not enough alternatives at the moment!



Green raw materials

1. Farmed moss
2. Wood fibre
3. Cultivated fibrous materials
4. Compost
5. Others?



Thank you for your attention!

