



FORLIANCE

GROWING CLIMATE ACTION

Biochar

Natural Carbon Capture Solution

Senckenberg & NeoCOLAM 2023

20+

years of
experience

1500+

business clients contribute to a better climate
with our projects and services

55+

international specialists
contribute to our team

Accreditations +
Memberships:



Technical
Partner
in the

Initiative
20x20



OUR BUSINESS

Our core business activities: **Nature-based solutions (NBS) project development** and **Climate strategy consulting** and **climate project finance**



International Development Coop.

We support international development banks and organizations in planning climate policy frameworks, payment systems for ecosystem services, etc.

References: IKI, NAMA, IDB, EIB, CAF, KfW, GIZ, Int. Water Fund, WorldBank, etc.



Climate Project Dev. and Mgmt.

We perform feasibility studies, DD, PDD-dev., remote sensing and carbon monitoring, carbon methodology dev., KPI dashboard, etc. We pre- and co-finance NBS climate projects.

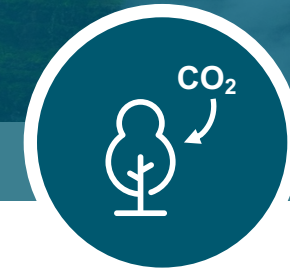
References: climate projects globally, Bayacao DR, FSC, VERRA, GS4GG, ForestFinance, Vichada Group, etc.



Climate Strategy Consulting

We perform consulting to B2B clients in regards of carbon management / Net Zero Carbon Strategy (GHG emission accounting (PCF, CCF), reduction targets, carbon offset).

References: Heidelberger Druckmaschinen, Autostadt, VfL Wolfsburg, and other Bundesliga clubs

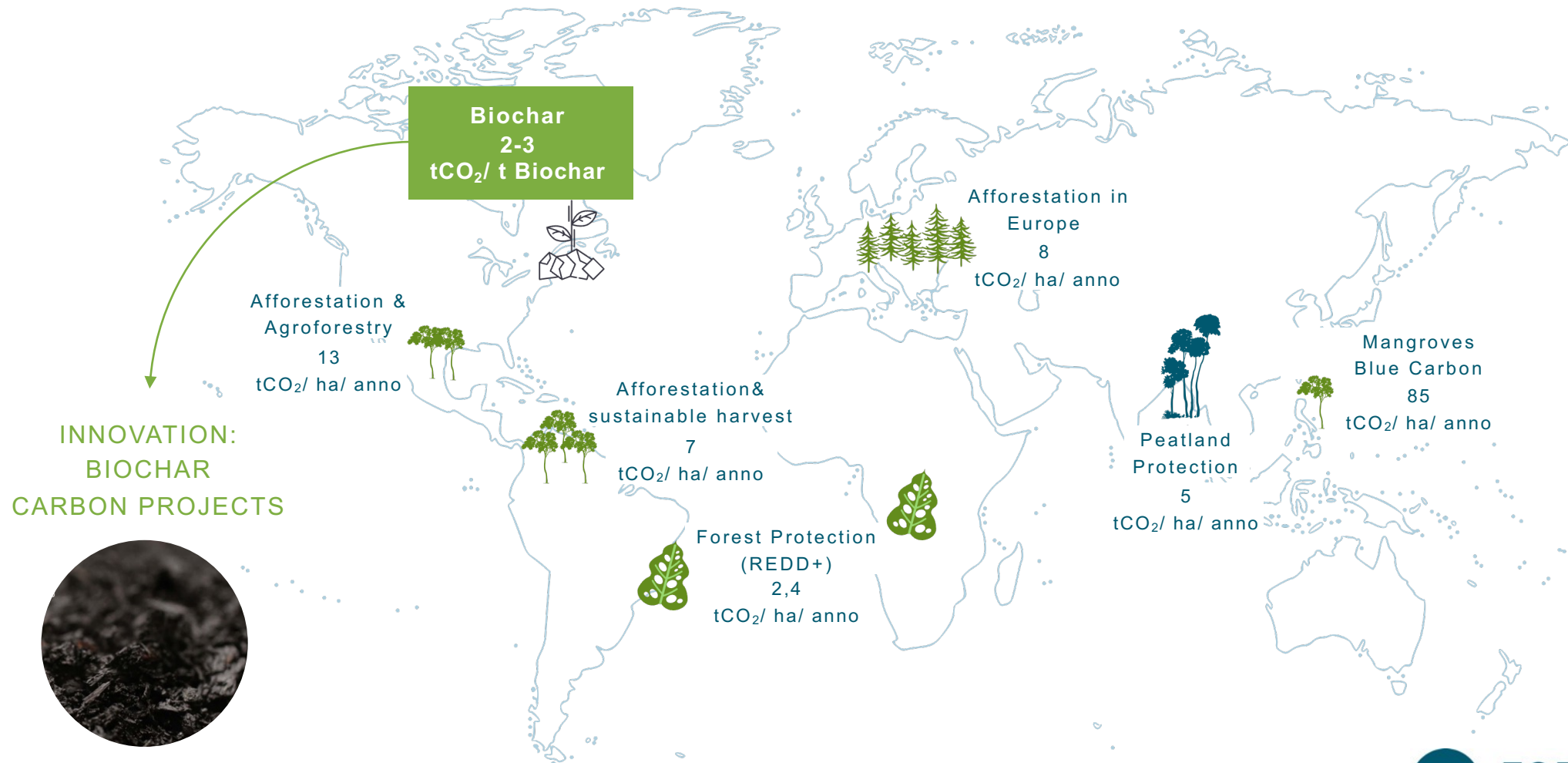


Carbon Credit Sales

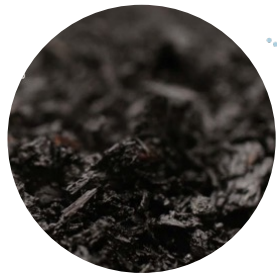
We have a strong existing NCS project portfolio (GS4GG, VERRA) and future pipeline. We develop and unlock new project types like Biochar, German Forest

References: DHL, KLM, Zalando, etc.

WE DEVELOP, FINANCE AND MANAGE NBS PROJECTS



INNOVATION:
BIOCHAR
CARBON PROJECTS



BIOCHAR – FEATURES

A **Carbon-rich** product of thermal decomposition of organic matter without oxygen

Used as soil amendment, waste management, energy generation and **C-removal**

C-Removal potential
2-3* t CO₂e/ t of biochar

Stable form of **Carbon**; after 100 years 74% remains as sequestered carbon¹ in soils

1 = Ithaka Institute, 2020; (2) EBI 2020
* t CO₂ depends on LCA.

FEEDSTOCK FOR BIOCHAR PRODUCTION

Several Waste Biomass sources available



Crops residues



Forestry & woody residues



Urban organic waste residues

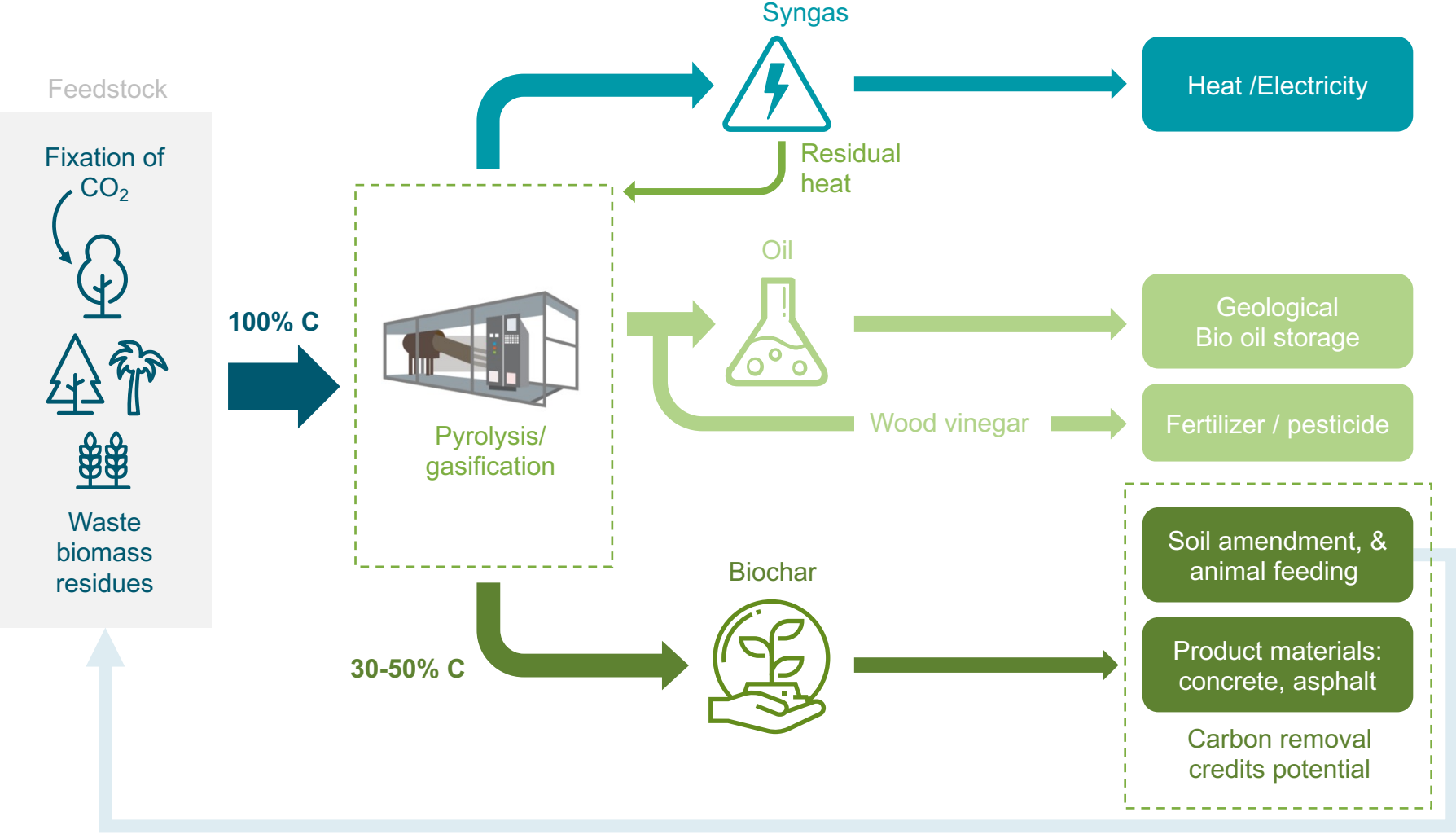


Food processing residues



Animal Manure

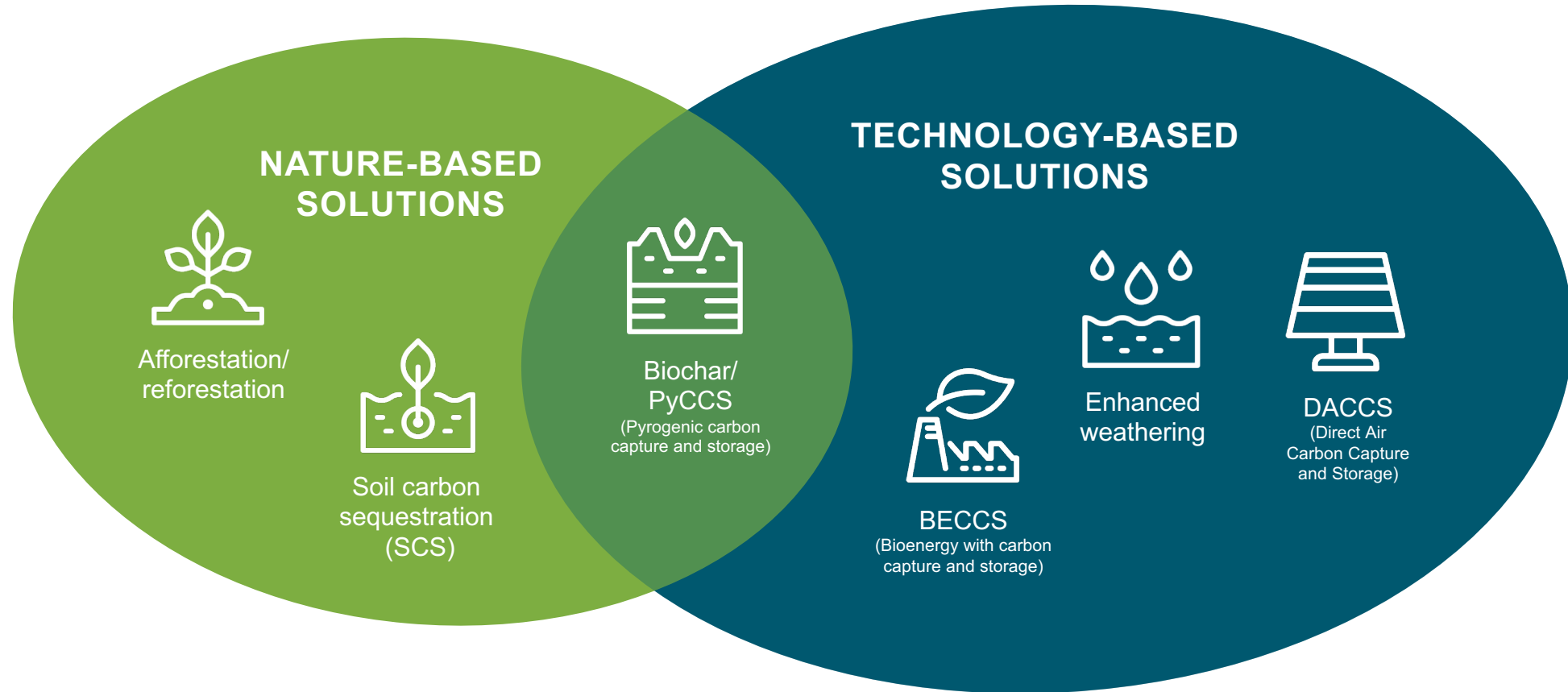
BIOCHAR PROCESS



Source: Modified from Schmidt HP: Biochar and PyCCS included as negative emission technology by the IPCC, the Biochar Journal 2018, Arbaz, Switzerland.

CARBON REMOVAL TECHNOLOGIES

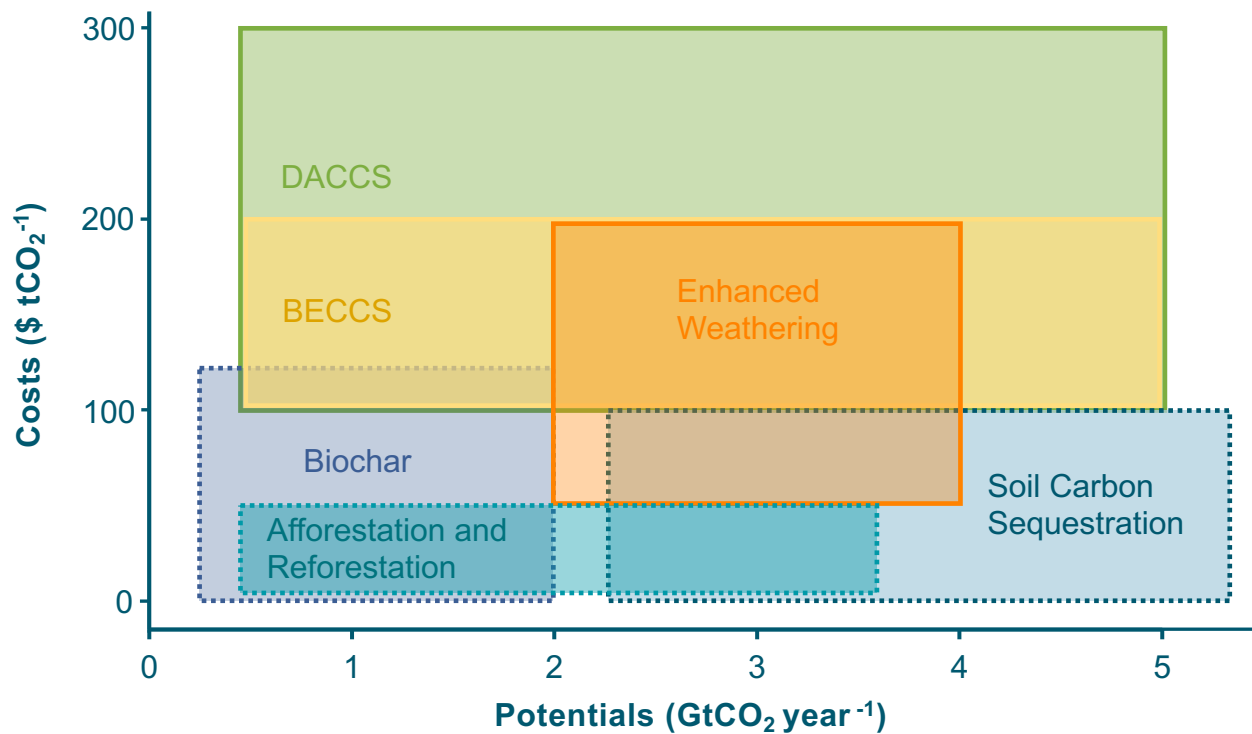
- To succeed, all types of C-Sink solutions must be included
- The nature-based solutions come with side-benefits
- The more technical solutions need more research
- Biochar is an ideal starting point as it is market-ready and measurable



BIOCHAR GHG REMOVAL POTENTIAL

IPCC Special Report 2018

Cost-effective climate solutions are urgently needed to reach the Paris Agreement Goals and limit the global warming under 1.5 °C. The Intergovernmental Panel on Climate Change (IPCC) stated nations may need to remove up to 1000 Gt of CO₂ by 2050. There are six key methods which offer great potential to draw down carbon; biochar is one of these.



Biochar Carbon Removal

- Ambitious companies with Net Zero commitments can incorporate biochar removal solutions within its climate neutrality strategies.
- Global Carbon Sink potential **0.3-2 GtCO₂/ year**

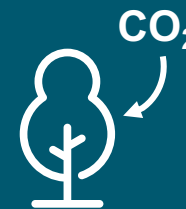
TYPE OF CARBON CREDITS FROM BIOCHAR: REMOVALS



REDUCTIONS

- Reduction or avoidance in atmospheric CO₂ concentration
- Nature based solutions (partially IFM, REDD+)
- Renewable Energy & Energy efficiency

TYPE OF CARBON CREDITS



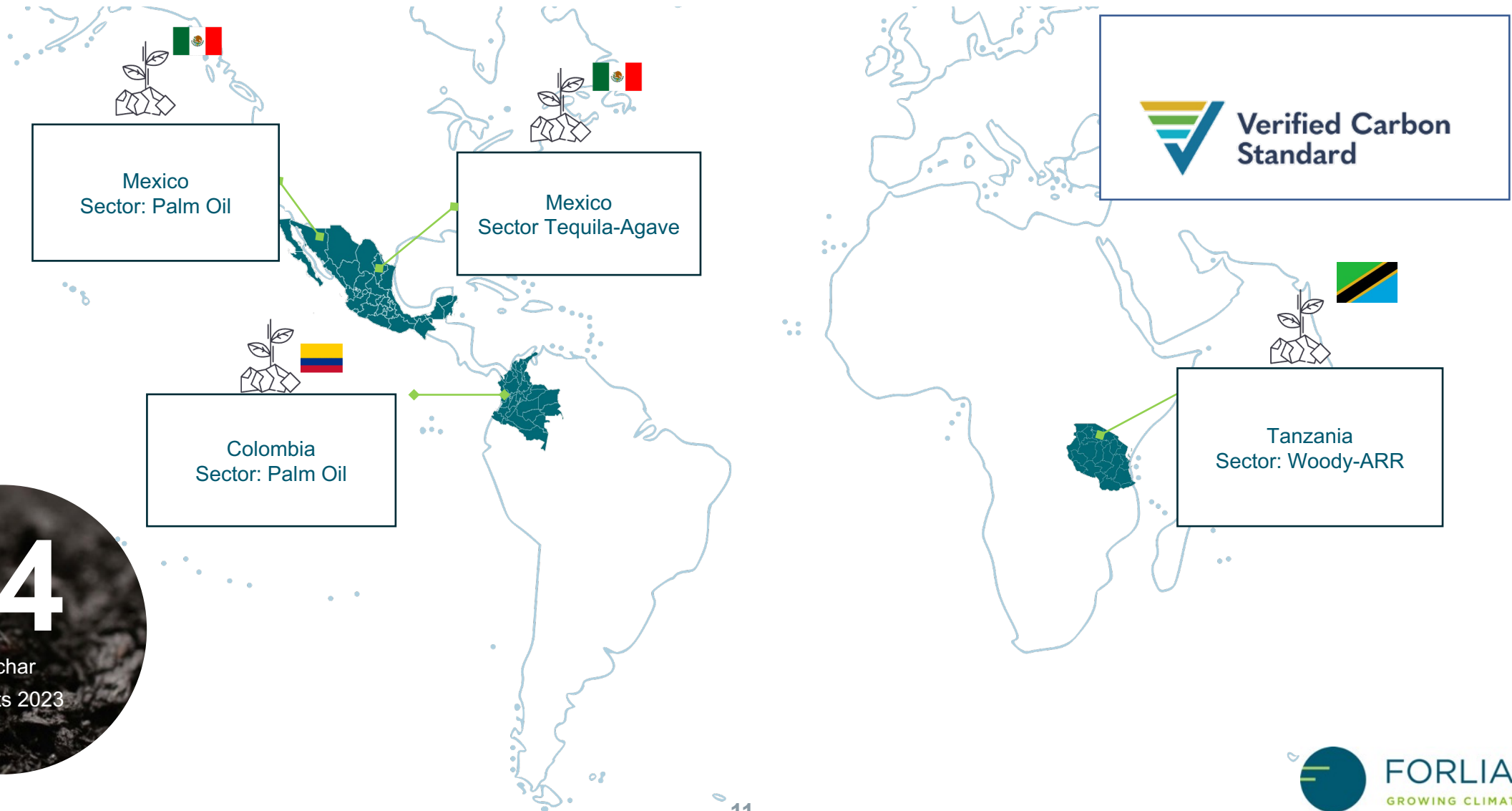
REMOVALS

- Removes the concentration of atmospheric CO₂
- Nature based solutions (Afforestation Reforestation, SOC, **Biochar**)
- Technology based solutions (BECCS, DACCS)

MULTIPLE CERTIFIABLE APPLICATIONS OF BIOCHAR



BIOCHAR CARBON PROJECTS UNDER DEVELOPMENT



+4
Biochar
Projects 2023



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