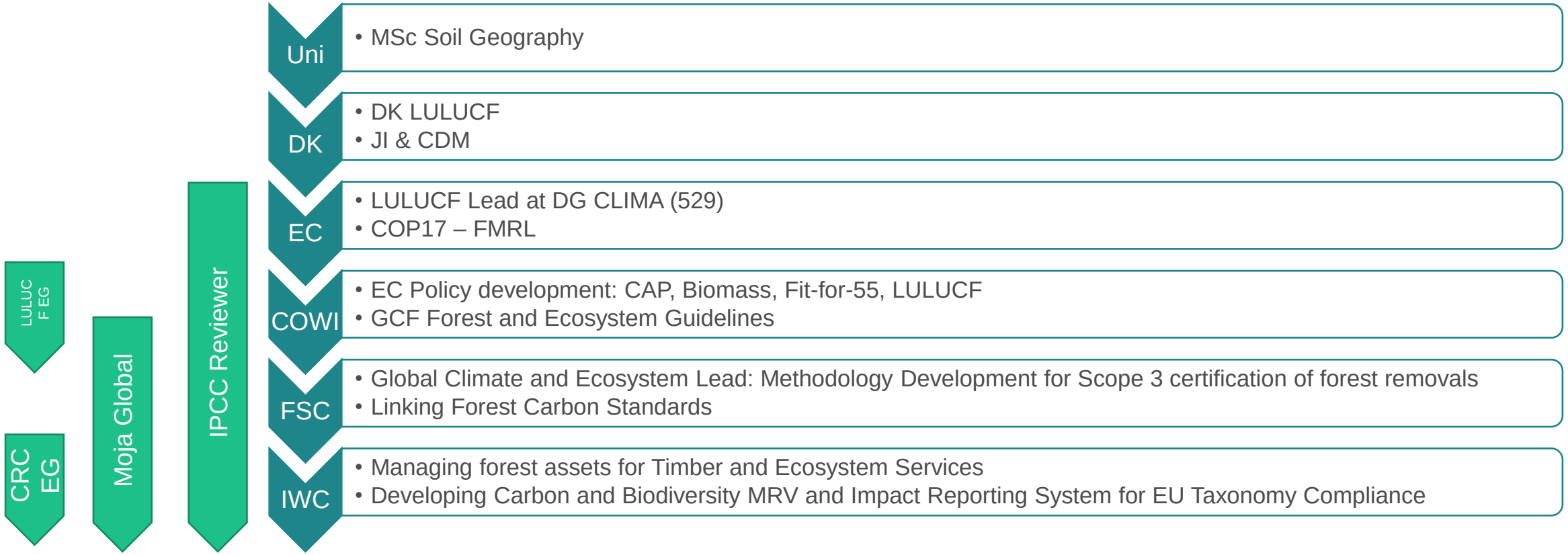
The role & tools of LULUCF inventories as drivers of climate action

Asger Strange Olesen/Independent Expert

European Commission

Who’s talking



The parallel universe

1. Private demand for LULUCF data is growing – and will continue
2. Private Standards for target setting and disclosure have developed and are being adopted for transparency and comparability
3. A Mitigation Hierarchy Approach drives UNFCCC style reporting and accounting

Insights from outreach

DATA and solution **INTEGRITY** are major challenges for all, even the big front runners

Data can be made, and scalable **TOOLS EXIST** – in combination this will be the game changer

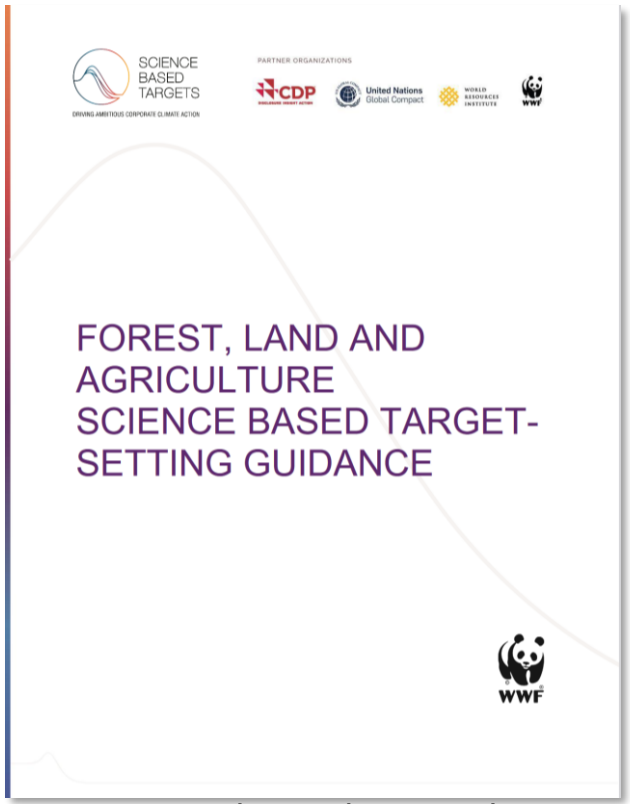
Companies fear **GREENWASHING** and lack skills and time – they feel lost!

Companies market access depend on **FACT-BASED** credible action and **TRUST**

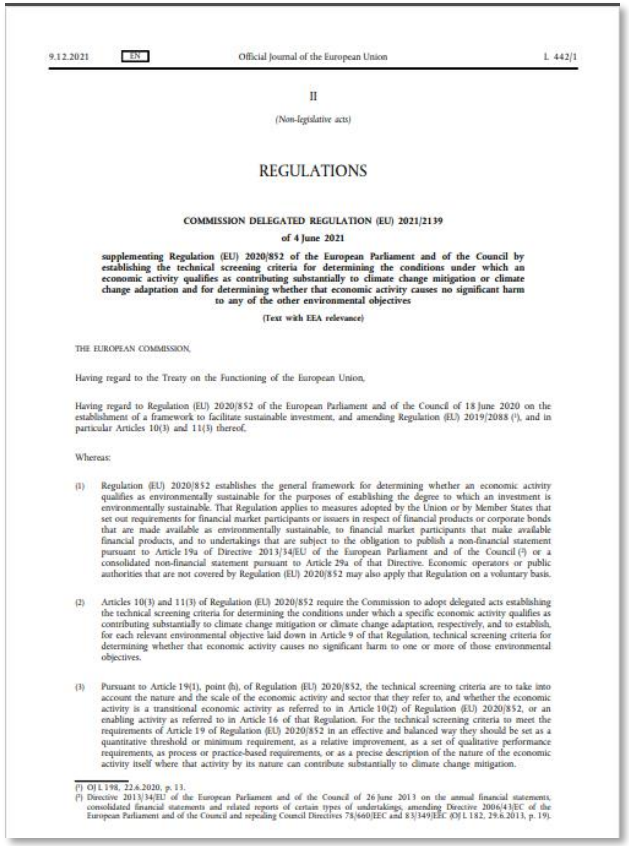
How to report on forest impacts, set forest targets, and disclose climate benefits and risks

Three key resources

Reporting, UNFCCC style.
Occasionally stricter



Target Setting and Accounting,
updated Kyoto Style.



9.12.2021 EN Official Journal of the European Union L 442/1

II

(Non-legislative acts)

REGULATIONS

COMMISSION DELEGATED REGULATION (EU) 2021/2139

of 4 June 2021

supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (1), and in particular Articles 10(3) and 11(3) thereof,

Whereas:

(1) Regulation (EU) 2020/852 establishes the general framework for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable. That Regulation applies to measures adopted by the Union or by Member States that set out requirements for financial market participants or issuers in respect of financial products or corporate bonds that are made available as environmentally sustainable, to financial market participants that make available financial products, and to undertakings that are subject to the obligation to publish a non-financial statement pursuant to Article 19a of Directive 2013/34/EU of the European Parliament and of the Council (2) or a consolidated non-financial statement pursuant to Article 29a of that Directive. Economic operators or public authorities that are not covered by Regulation (EU) 2020/852 may also apply that Regulation on a voluntary basis.

(2) Articles 10(3) and 11(3) of Regulation (EU) 2020/852 require the Commission to adopt delegated acts establishing the technical screening criteria for determining the conditions under which a specific economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation, respectively, and to establish, for each relevant environmental objective laid down in Article 9 of that Regulation, technical screening criteria for determining whether that economic activity causes no significant harm to one or more of those environmental objectives.

(3) Pursuant to Article 19(1), point (h), of Regulation (EU) 2020/852, the technical screening criteria are to take into account the nature and the scale of the economic activity and sector that they refer to, and whether the economic activity is a transitional economic activity as referred to in Article 10(2) of Regulation (EU) 2020/852, or an enabling activity as referred to in Article 16 of that Regulation. For the technical screening criteria to meet the requirements of Article 19 of Regulation (EU) 2020/852 in an effective and balanced way they should be set as a quantitative threshold or minimum requirement, as a relative improvement, as a set of qualitative performance requirements, as process or practice-based requirements, or as a precise description of the nature of the economic activity itself where that activity by its nature can contribute substantially to climate change mitigation.

(1) OJ L 198, 22.6.2020, p. 13.
(2) Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC (OJ L 182, 29.6.2013, p. 19).

Activity level CCM and CCA
assessment and disclosure

European Commission

SBTI, GHG Protocol, CDP
Transparency, Accountability, Comparability

Get data

Paris Agreement and science aligned

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Report and account consistently and transparently

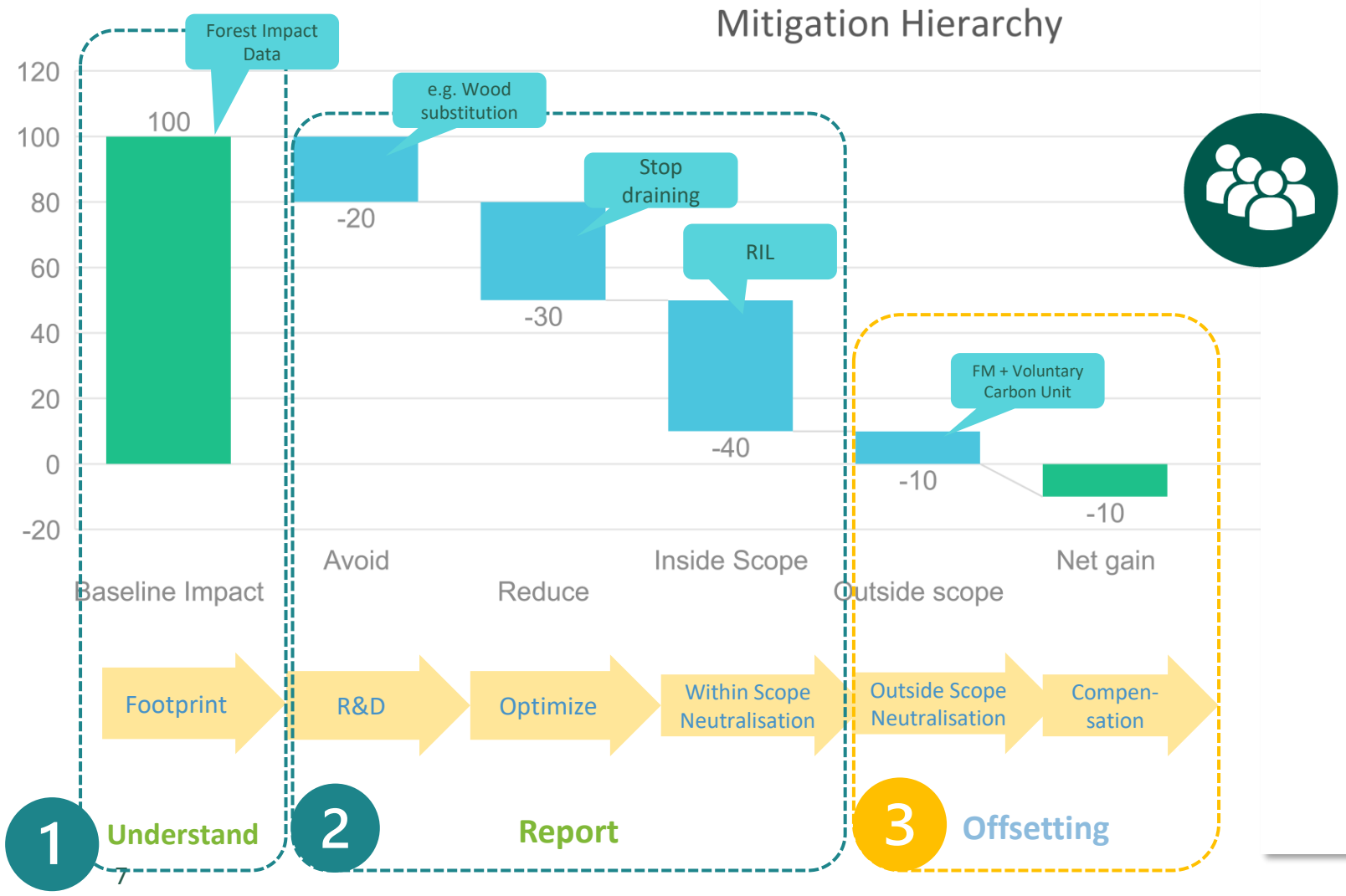
GREENHOUSE GAS PROTOCOL

CDP

On Forests, Water, Carbon,…

European Commission

Corporate journey to net-zero: The mitigation hierarchy



Impact Report
by
Organization X

Approved by the Board April 2022
Published May 2022
Scrutinized in eternity

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

GREENHOUSE GAS PROTOCOL

CDP

TNFD Taskforce on Nature-related Financial Disclosures

IUCN Nature based Solutions
The nature of progress

Marketing, branding, storytelling,...

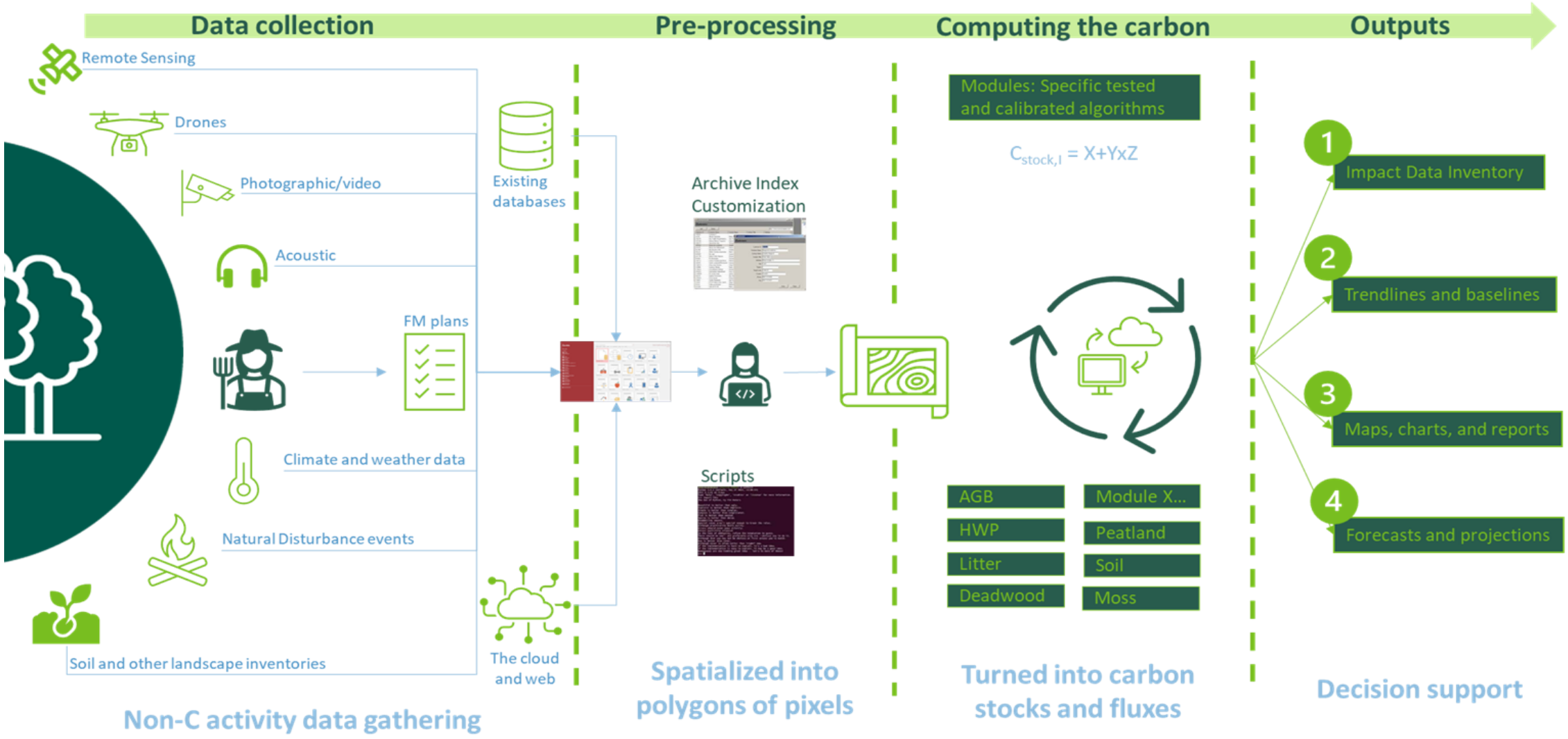
European Commission

DATA!

It all ends with being able to report and model in accordance with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories regarding emissions and removals

European Commission

Best practice data flow 2023



Market forces at work

1. Green Deal/Fit-for-55
2. Green Claims,
3. SFDR,
4. EU Green Taxonomy,
5. EUDR,
6. Farm-to-Fork,
7. Forest Strategy
8. CAP!!

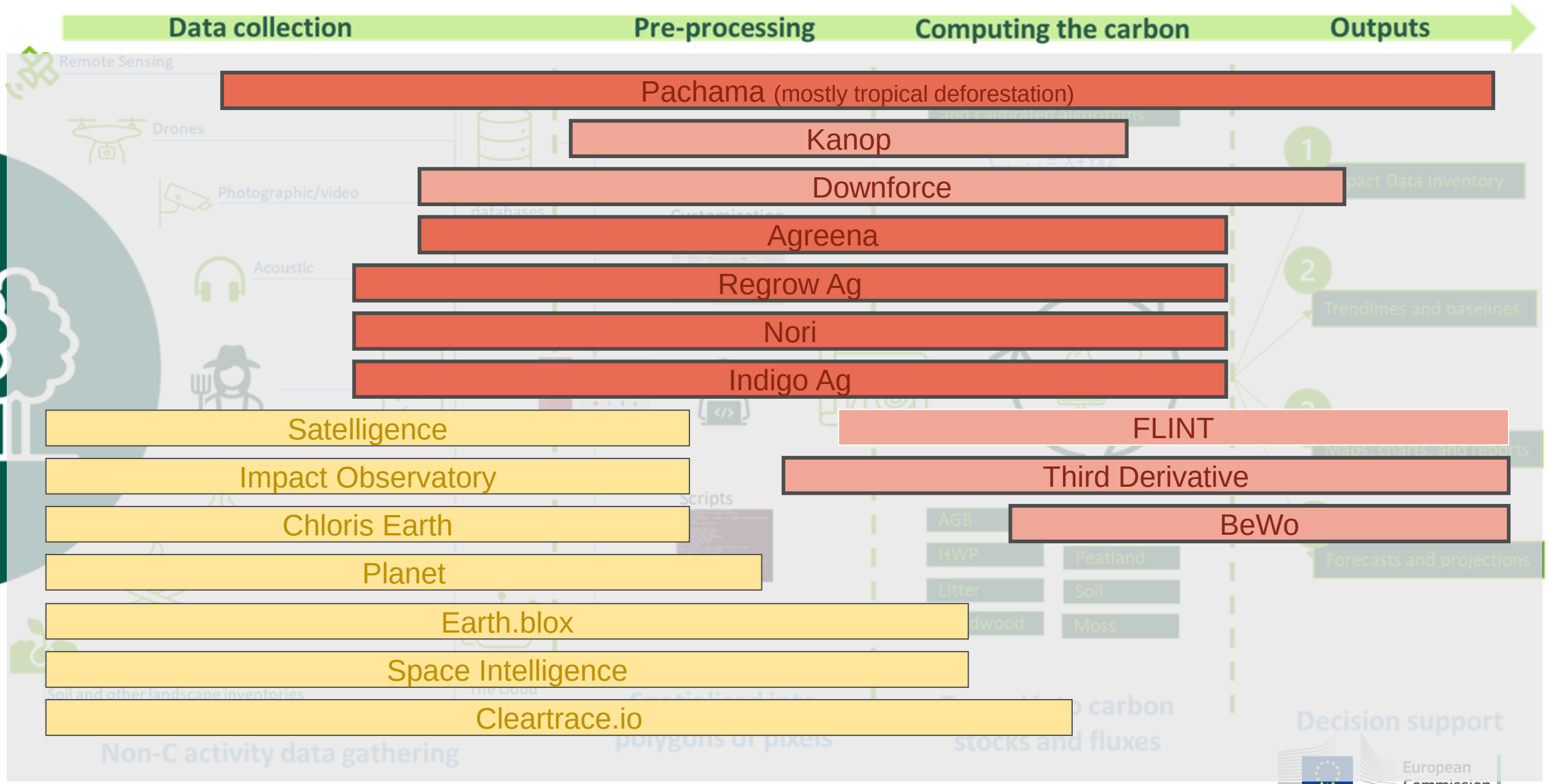
CRC Proposal

carbon removals: by 2028, all land managers should have access to verified emission and removal data to measure carbon farming practices, and all CO_2 captured, transported, used and stored through industrial activities should be reported and accounted; by 2030, carbon farming approaches should contribute to reaching the LULUCF target of -310 Mt CO_2 eq net

AD x EF = GHG

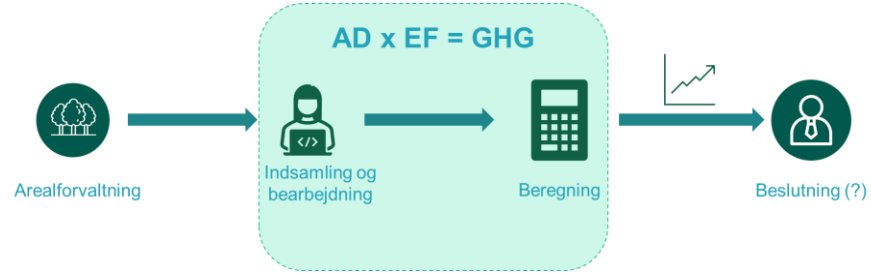
Land Management → Processing → Calculation → Decisions

1	2	3	Private sector
Satelligence, Planet, Space Intelligence, Chloris Earth, Earthblox, Cleartrace.io, SEPAL, Impact Observatory	Pachama, Kanop, Downforce, Third Derivative, Restor,...	Agreena, LBC, MoorFutures, Puro.Earth, Indigo AG, Regrow Ag, Nori, FLINT, BeWo,...	SBTI-FLAG GHG Protocol Removals PACT SBTN


Data collection
Pre-processing
Computing the carbon
Outputs
Pachama (mostly tropical deforestation)
Kanop
Downforce
Agreena
Regrow Ag
Nori
Indigo Ag
Satelligence
Impact Observatory
Chloris Earth
Planet
Earth.blox
Space Intelligence
Cleartrace.io
FLINT
Third Derivative
BeWo
Remote Sensing
Drones
Photographic/video
Acoustic
Trendlines and baselines
Forecasts and projections
AGB
HWP
Litter
Peatland
Soil
Moss
Non-C activity data gathering
Decision support

The Data Challenge:

Same same, but different

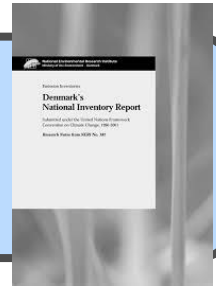


EF: Journals, databases,...

AD: Statistics, other reporting,...

LULUCF

Territorial, compliance



Private Tools

Depending on exact supply chains

Global Scope 1-3 reporting

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Methodologies

Established systems with ”transparent” standards validation and 3rd party verification

Accounted and mostly additional, but not recognised in e.g. ETS

VERRA

Agreena

1

2

3

EU Policy Overview

Green deal, Fit for 55, LULUCF, CRC-F, SFDR, EUDR, Nature Restoration Law, Green Taxonomy, CBAT,...

European Commission

Governments

EU Climate Law

Fit for 55%

LULUCF Regulation

LULUCF

Investors/credit institutions, insurers

EU Taxonomy

SFDR

Green Claims

EU Taxonomy

GREENHOUSE GAS PROTOCOL

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Credit traders/brokers/buyers

EU-ETS

EU-ETS

Green Claims

Voluntary Carbon Markets

GREENHOUSE GAS PROTOCOL

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Land Owner/manager

EU Taxonomy

Sustainable Carbon Cycles

Soil Health Law

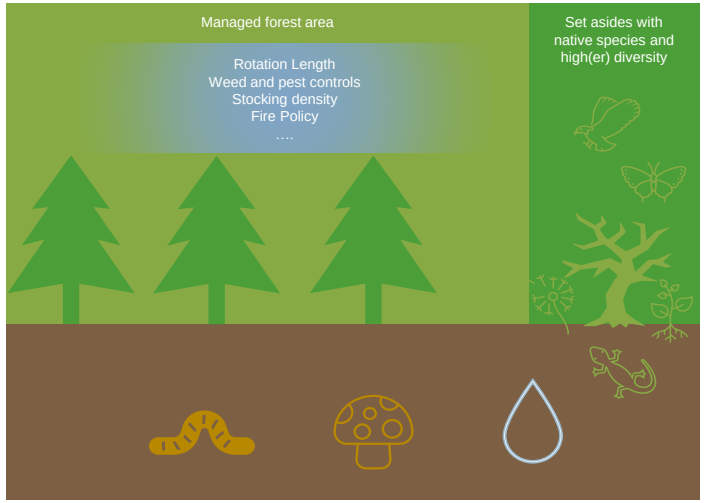
Biodiversity Strategy

Carbon Removal Certificates

Nature Restoration Law

Habitat Directive

CAP



Forest Based Supply Chain

EU-ETS

Green Claims

EUDR

Harvested Wood Products

GREENHOUSE GAS PROTOCOL

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

European Commission

Streamlining and disclosing forest GHG reporting

EU Green Deal

SFDR (2019/2088)

EU Green Taxonomy (2020/852)

Technical Screening Criteria CDR (2021/2139)

EU LULUCF Regulation/Decision

?

CRC Framework

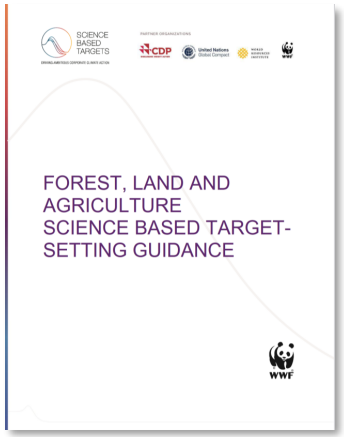
?

Green Claims

EUTR/DR

EU RE Directive (2018/2001)

2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories



European Commission

In 5 years, everyone owning forest above 13ha in the EU wanting to demonstrate carbon benefits:

CDR 2021/2139 FM TSC CCM 2.3 ***Climate Benefit Analysis***	The calculation of climate benefit complies with all of the following criteria
	(a) the **analysis is consistent with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories** (45). The climate benefit analysis is based on transparent, accurate, consistent, complete and comparable information, covers all carbon pools impacted by the activity, including above-ground biomass, below-ground biomass, deadwood, litter and soil, relies on the most conservative assumptions for calculations and includes appropriate considerations about the risks of non-permanence and sequestration, the risk of saturation and the risk of leakage.
	(b) the **business-as-usual practices, including harvesting practices**, are one of the following: (i) the management practices as documented in the latest version of the forest management plan or equivalent instrument before the start of the activity, if any; (ii) the most recent business-as-usual practices prior to the start of the activity; (iii) the practices corresponding to a management system ensuring that carbon stocks and sinks levels in the forest area are maintained or strengthened over the long term as set out in Article 29(7), point (b), of Directive (EU) 2018/2001.
	(c) the resolution of the analysis is proportionate to the size of the area concerned and values specific to the area concerned are used.
	(d) emissions and removals that occur due to **natural disturbances**, such as pests and diseases infestations, forest fires, wind, storm damages, that impact the area and cause underperformance do not result in non-compliance with Regulation (EU) 2020/852, provided that the climate benefit analysis is consistent with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories regarding emissions and removals due to natural disturbances.

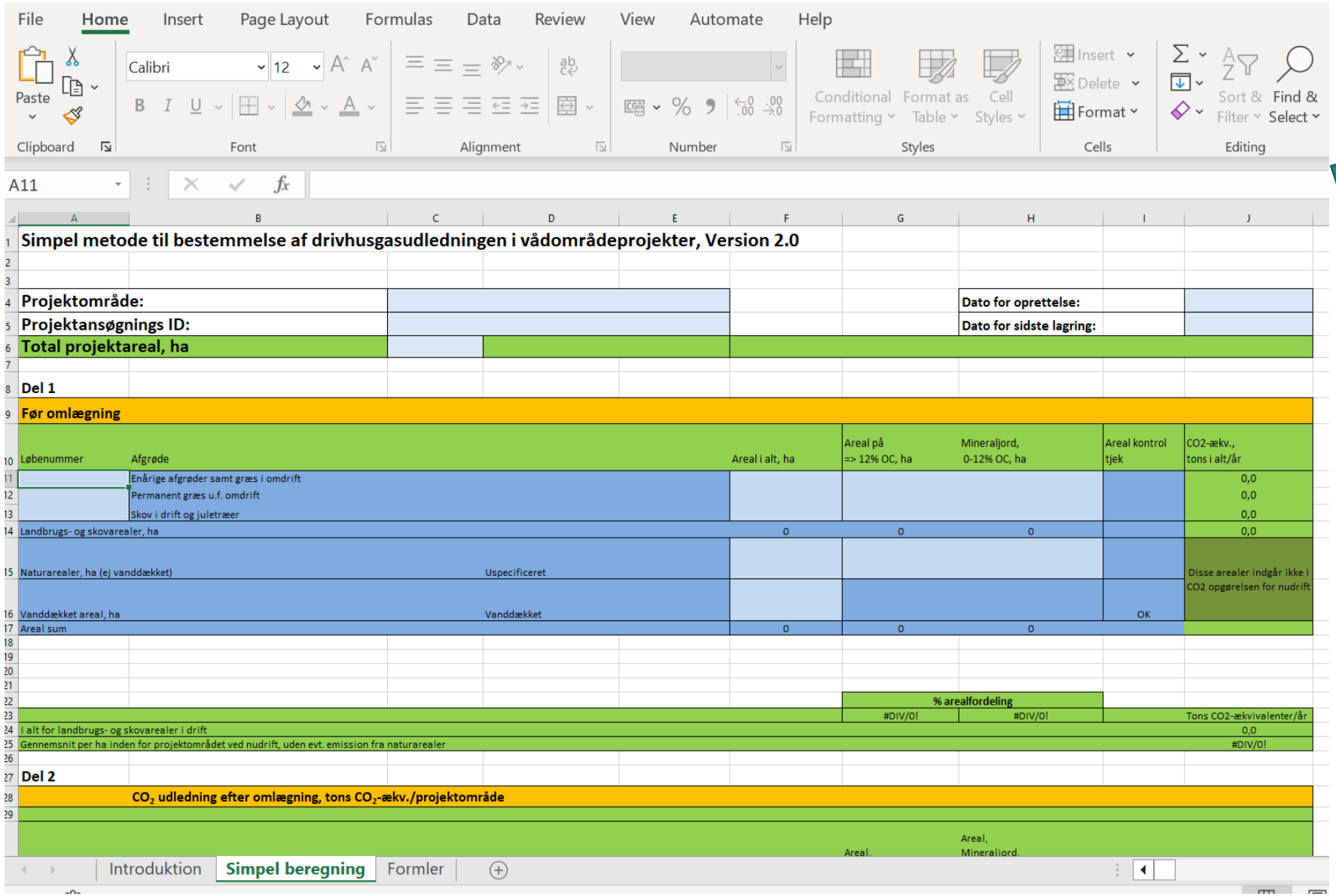
GHG-Protocol requires HWP as well

Examples of tools and initiatives

1. Project Level Peatland Excel Calculator
2. Open source code repository
3. Applied dissemination as methodologies and guidelines

European Commission

Example 1: Simple Calculator Tools



File Home Insert Page Layout Formulas Data Review View Automate Help

Paste Clipboard Calibri 12 Font Alignment Number Conditional Formatting Format as Table Cell Styles Styles Insert Delete Format Cells Sort & Filter Find & Select Editing

A11

Simpel metode til bestemmelse af drivhusgasudledningen i vådområdeprojekter, Version 2.0

Projektområde:						**Dato for oprettelse:**			
Projektansøgnings ID:						**Dato for sidste lagring:**			
Total projektareal, ha									
Del 1									
Før omlægning									
Løbenummer	Afgrøde			Areal i alt, ha	Areal på => 12% OC, ha	Mineraljord, 0-12% OC, ha		Areal kontrol tjek	CO2-ækv., tons i alt/år
	Enårige afgrøder samt græs i omdrift								0,0
	Permanent græs u.f. omdrift								0,0
	Skov i drift og juletræer								0,0
Landbrugs- og skovarealer, ha				0	0	0			0,0
Naturarealer, ha (ej vanddækket)		Uspecificeret							Disse arealer indgår ikke i CO2 opgørelsen for nudrift
Vanddækket areal, ha		Vanddækket						OK	
Areal sum				0	0	0			
					% arealfordeling				
					#DIV/0!	#DIV/0!			Tons CO2-ækvivalenter/år
I alt for landbrugs- og skovarealer i drift									0,0
Gennemsnit per ha inden for projektområdet ved nudrift, uden evt. emission fra naturarealer									#DIV/0!
Del 2									
CO_2 udledning efter omlægning, tons CO_2-ækv./projektområde									
					Areal,	Areal, Mineraljord,			

Introduktion | Simpel beregning | Formler

Project Level Calculator for peatland restoration

-

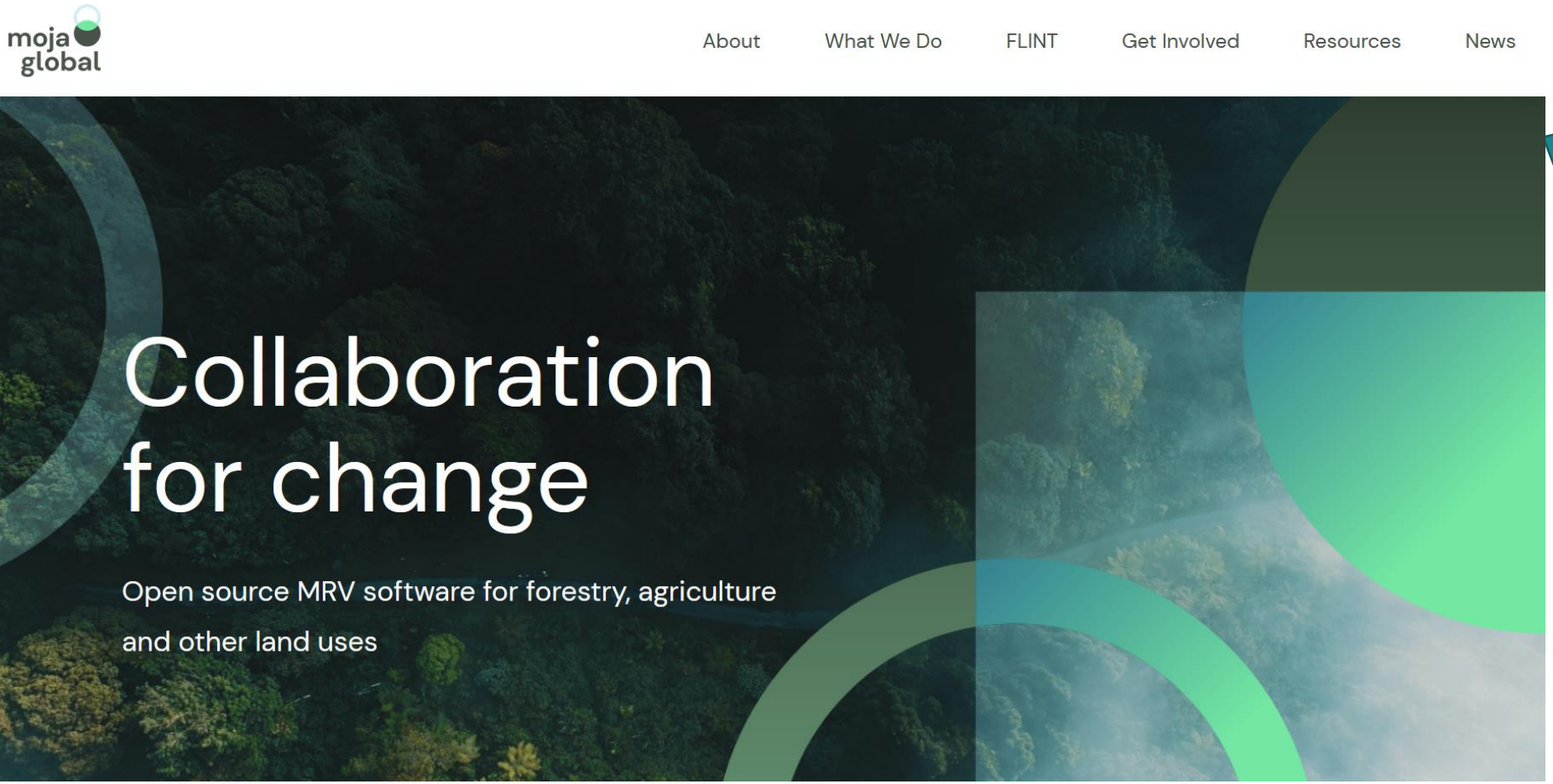
Free download and use from ministry homepage

-

By Steen Gyldenkærne

European Commission

Example 2: Open access source code/algorithms



Moja Global, as open source, git hub based repository for downloadable cloud based modules of the CBM-CFS3 model: FLINT

-

The algorithms and data processing steps professionals need

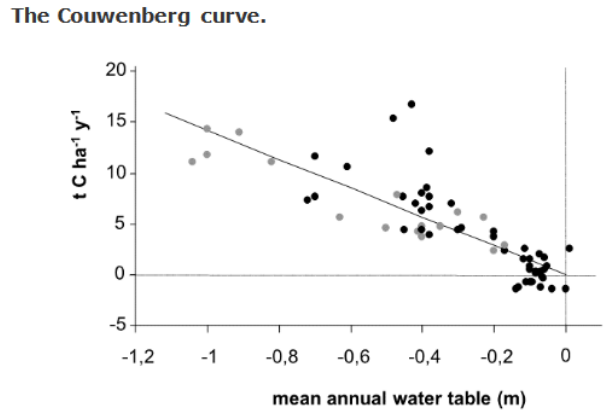
-

By Werner Kurz, Rob Waterworth et al.

DISCLAIMER!

European Commission

Example 3: Research driven schemes with dissemination objectives a.k.a. Hans Joosten et al.



Couwenberg et al., 2011

Emission response function linking water table, land use, and histic horizons to EFs

-

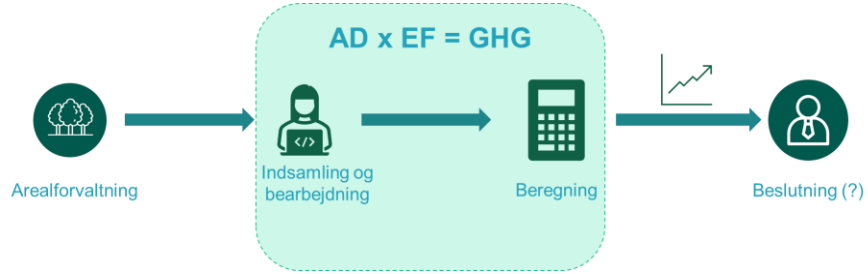
"Simple" methodologies

-

By the MoorFutures team

European Commission

The Vision

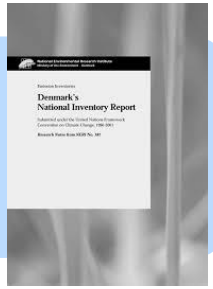


Joint and open data provision

AD x EF = GHG

Open source, shared, updated, repository of Efs, methodologies, tools, databases, HWP!!!

Territorial, compliance



LULUCF

Global Scope 1-3 reporting

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Balancing emissions across sectors, based on CRC QUAL.I.TY

VERRA

Agreena

Thank you

European Commission