



Commission proposal for a **Carbon Removal Certification (CRC) Regulation**

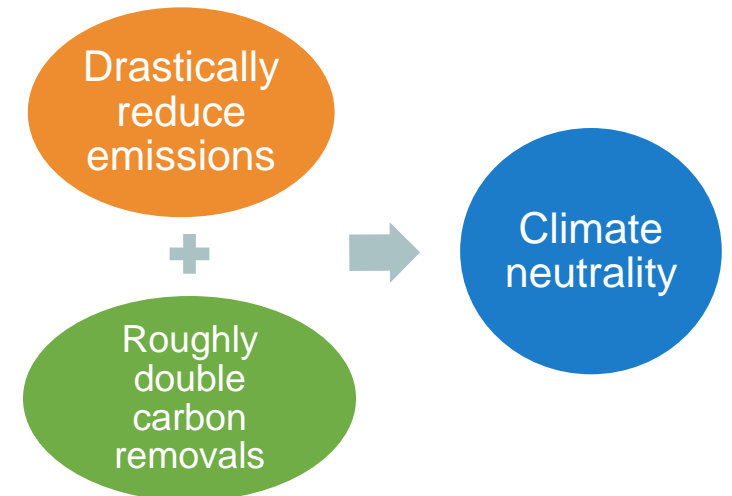
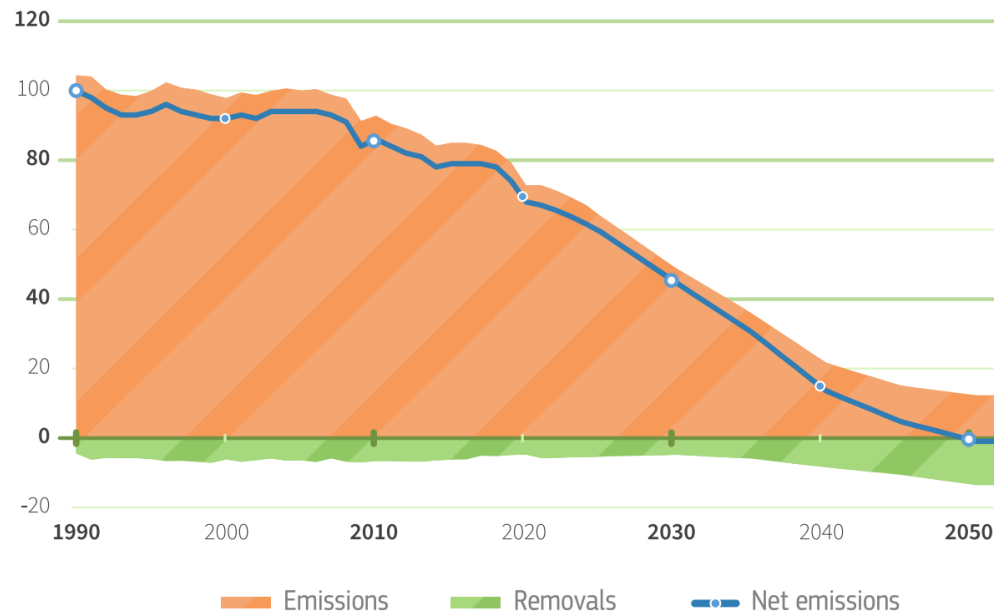
And the Revision of LULUCF Regulation

*European Commission DG CLIMA
Stina Jansson 9 May 2023*

Introduction

Why carbon removals?

- EU commitment to the **Paris Agreement**: reach net zero emissions by 2050 and net negative emissions thereafter
- EU GHG emissions would need to drop by 85-95% compared to 1990
- Carbon removals are indispensable to fill the gap
- This will require removing several hundred Mt CO₂ out of the atmosphere every year



GHG projections for climate neutrality
1990 GHG emissions = 100
Source: EU 2030 Climate Target Plan

The policy context

Climate Law

- EU objective of **climate neutrality** by 2050

Land Use, Land Use Change and Forestry (LULUCF) Regulation

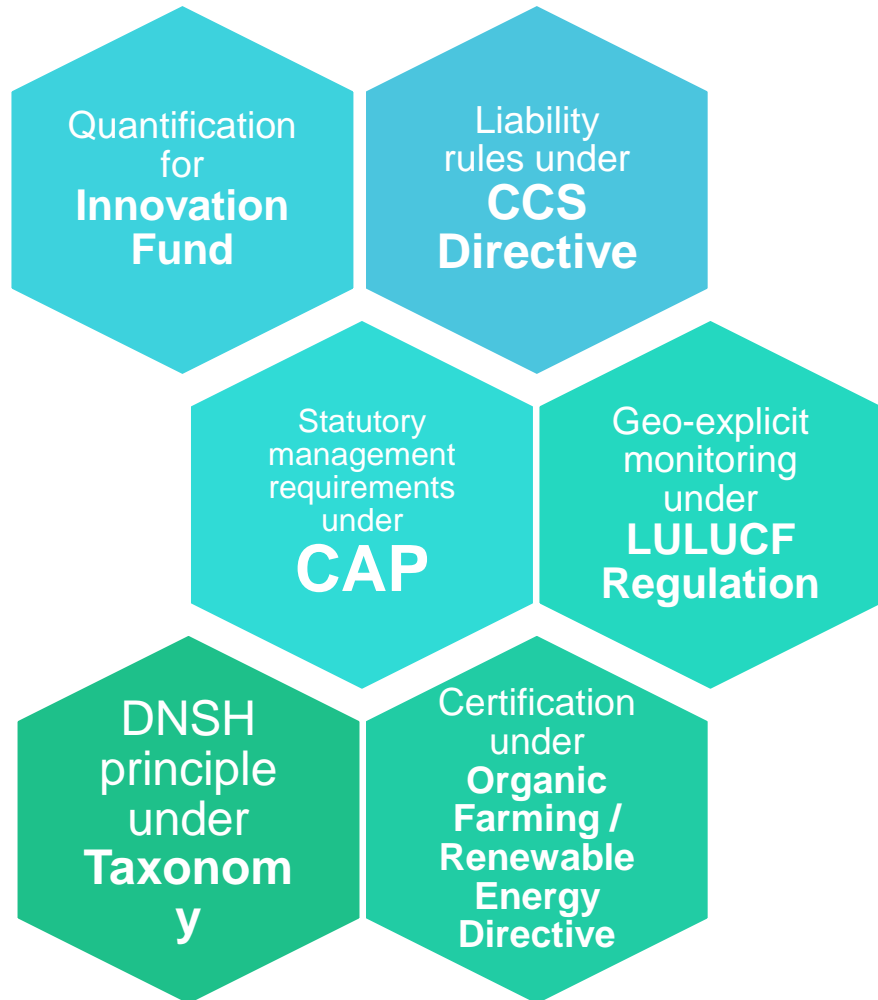
- ambitious target for net carbon removals in soils, forests and wood products: **-310 Mtonnes by 2030**

Communication on Sustainable Carbon Cycles

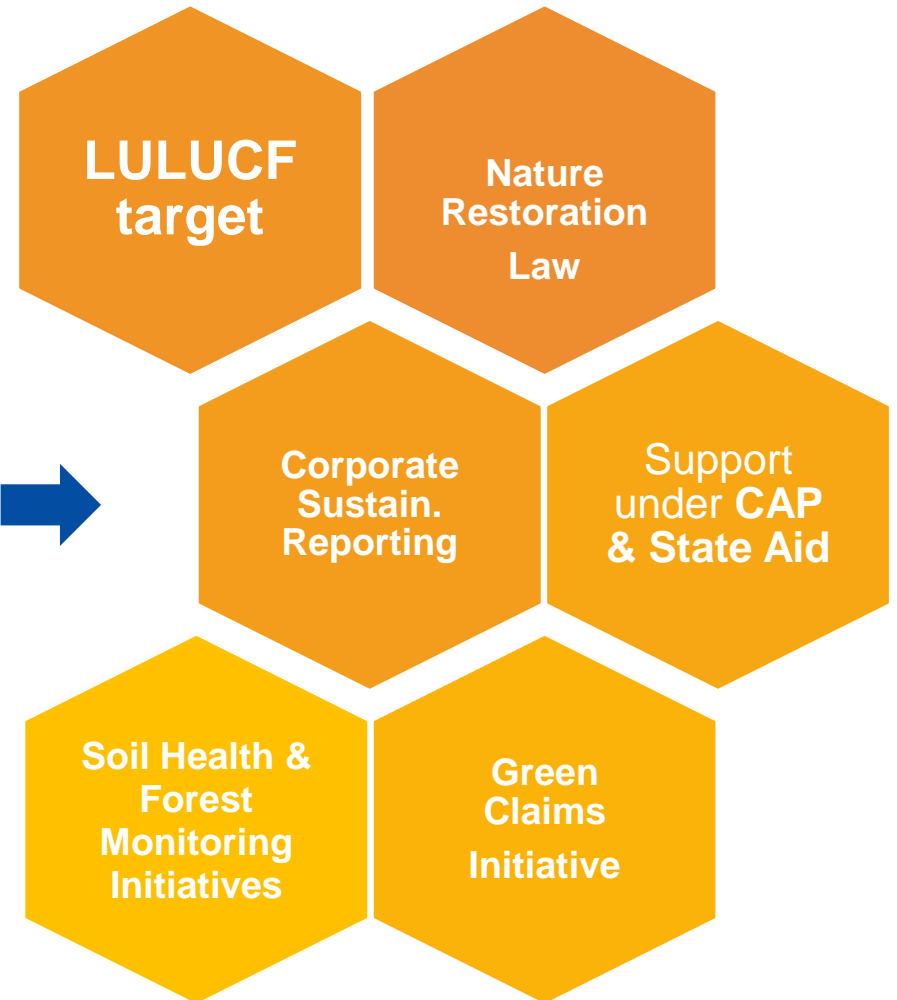
- roadmap to enable carbon removals:
 - **carbon farming** should contribute to 2030 target for LULUCF
 - **industrial solutions** should remove at least -5 Mtonnes in 2030

Linkages with other EU policies

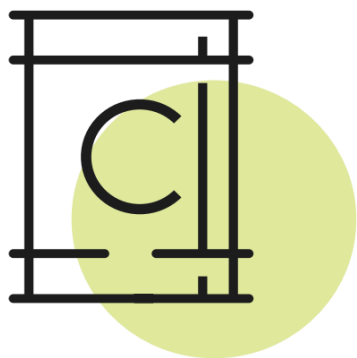
Building on experience from...



Will benefit implementation of...



Different types of carbon removal activities



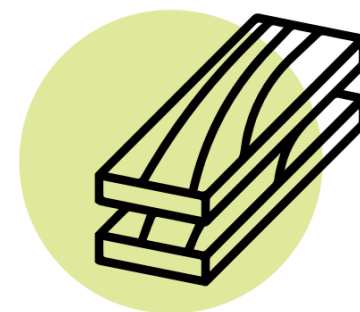
PERMANENT STORAGE

E.g. Bioenergy with Carbon Capture and Storage (BECCS), Direct Air Carbon Capture and Storage (DACCS)



CARBON FARMING

E.g. Af-/re-forestation, sustainable forest management, agroforestry, soil carbon sequestration, peatland restoration



CARBON STORAGE IN PRODUCTS

E.g. Use of wood-based materials in construction, long-lasting Carbon Capture and Utilisation (CCU)

Why certify carbon removals?



Incentivising high-quality carbon removals



Tailored certification methodologies



Fighting greenwashing & build trust



Harmonise market conditions

QU.A.L.I.TY criteria, methodologies & certification rules

And how will it work?

EU framework for carbon removal certification

QU.A.L.I.TY criteria



QUANTIFICATION



ADDITIONALITY



LONG-TERM STORAGE



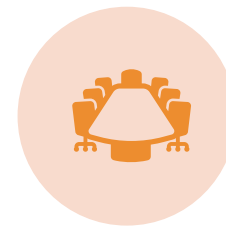
SUSTAINABILITY

+ tailored certification methodologies for the different types of carbon removal activities (next step)

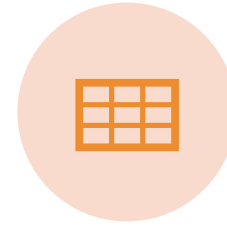
Certification rules



THIRD-PARTY
VERIFICATION



RELIABLE CERTIFICATION
SCHEMES



PUBLIC
REGISTRIES

+ Commission recognises the certification schemes that can certify compliance with QU.AL.I.TY criteria

Requirements for certification



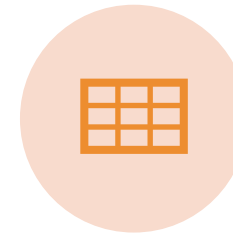
THIRD-PARTY VERIFICATION

*Carbon removal activities are
verified by independent
auditors*



RELIABLE CERTIFICATION SCHEMES

*Certification schemes respect
some minimum governance
standards*



PUBLIC REGISTRIES OF CARBON REMOVALS

*Carbon removals are recorded
in interoperable registries to
avoid double-counting*



The Commission will **recognise certification schemes** that should be used by operators to demonstrate compliance with the Regulation

How does it work?

1



EU develops methodologies

2



Operators join certification scheme

3



Third-party verification

4



Activity gets certified

5



Removals recorded in registry

LULUCF Revision: Regulation (EU) 2023/839

Key take-aways of the LULUCF revision: Regulation (EU) 2023/839*

Higher ambition

- Explicit MS targets - for first time
- Full territorial scope from 2026

Better monitoring

- Move to Tier-2 and Tier-3 level, geographically explicit basis (use of earth observation)

Improved governance

- Corrective action process
- Recommendations by Commission

EEA in the lead for implementation

- Reinforced EEA team, Copernicus tools

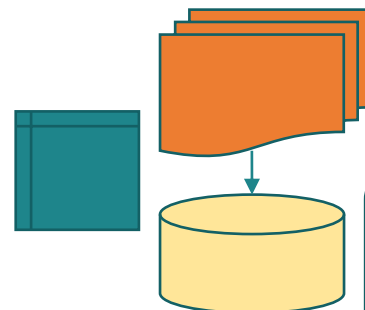
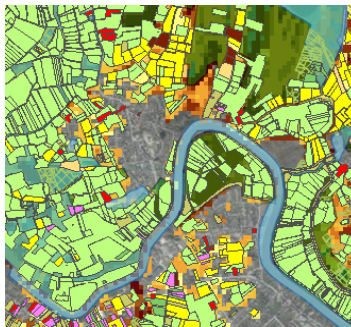
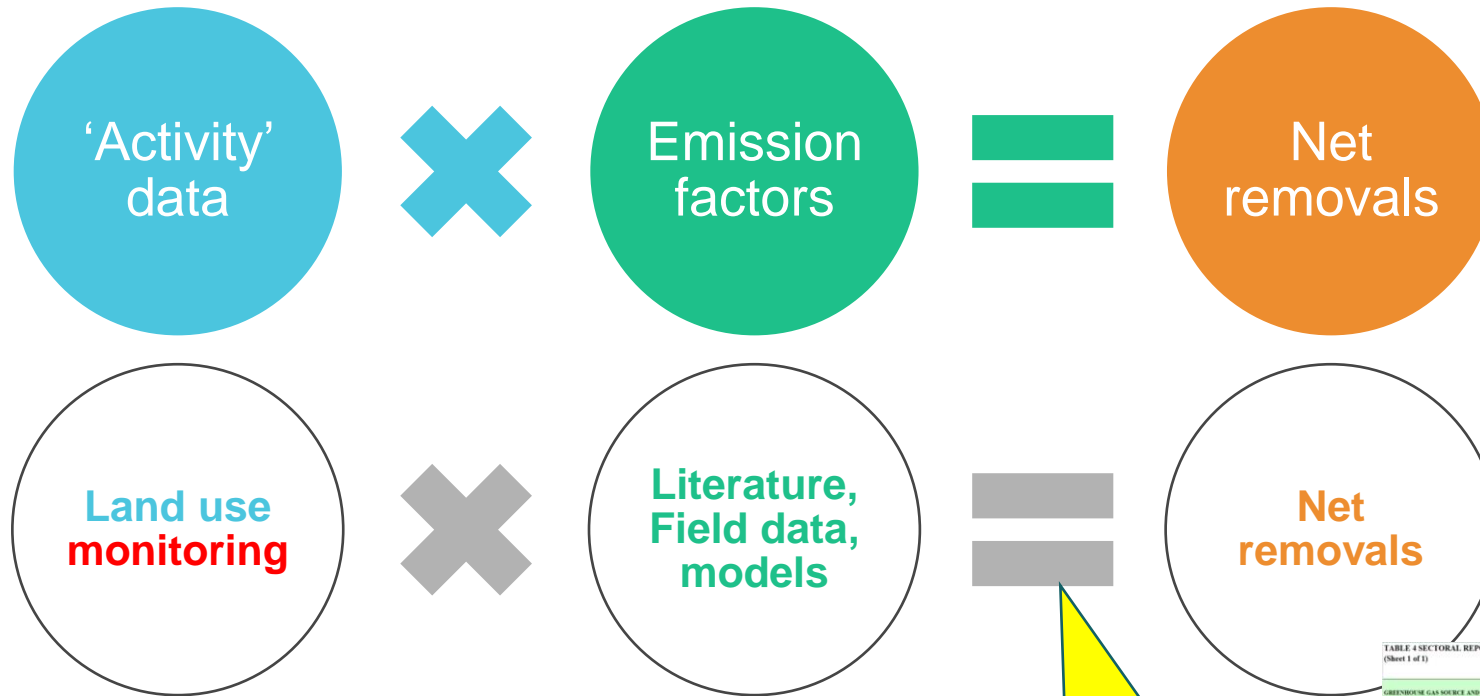
* <http://data.europa.eu/eli/reg/2023/839/oj>

Better monitoring

- Move to Tier-2 and Tier-3 level, geographically explicit basis (use of earth observation)

- Recital (29) ... all require enhanced monitoring of land, thereby helping to protect and enhance the resilience of nature-based carbon removals throughout the Union. The **monitoring and reporting of emissions and removals needs to be upgraded**, where applicable, using advanced technologies available under Union programmes, such as **Copernicus**, and **digital data collected under the Common Agricultural Policy**, applying the twin transition of green and digital innovation
- Recital (30) Mapping and monitoring provisions, **both in field and remote sensing monitoring**, should be introduced in order to allow Member States to have **geographically explicit information to identify priority areas** that have the potential to contribute to climate action. ...

Estimating removals

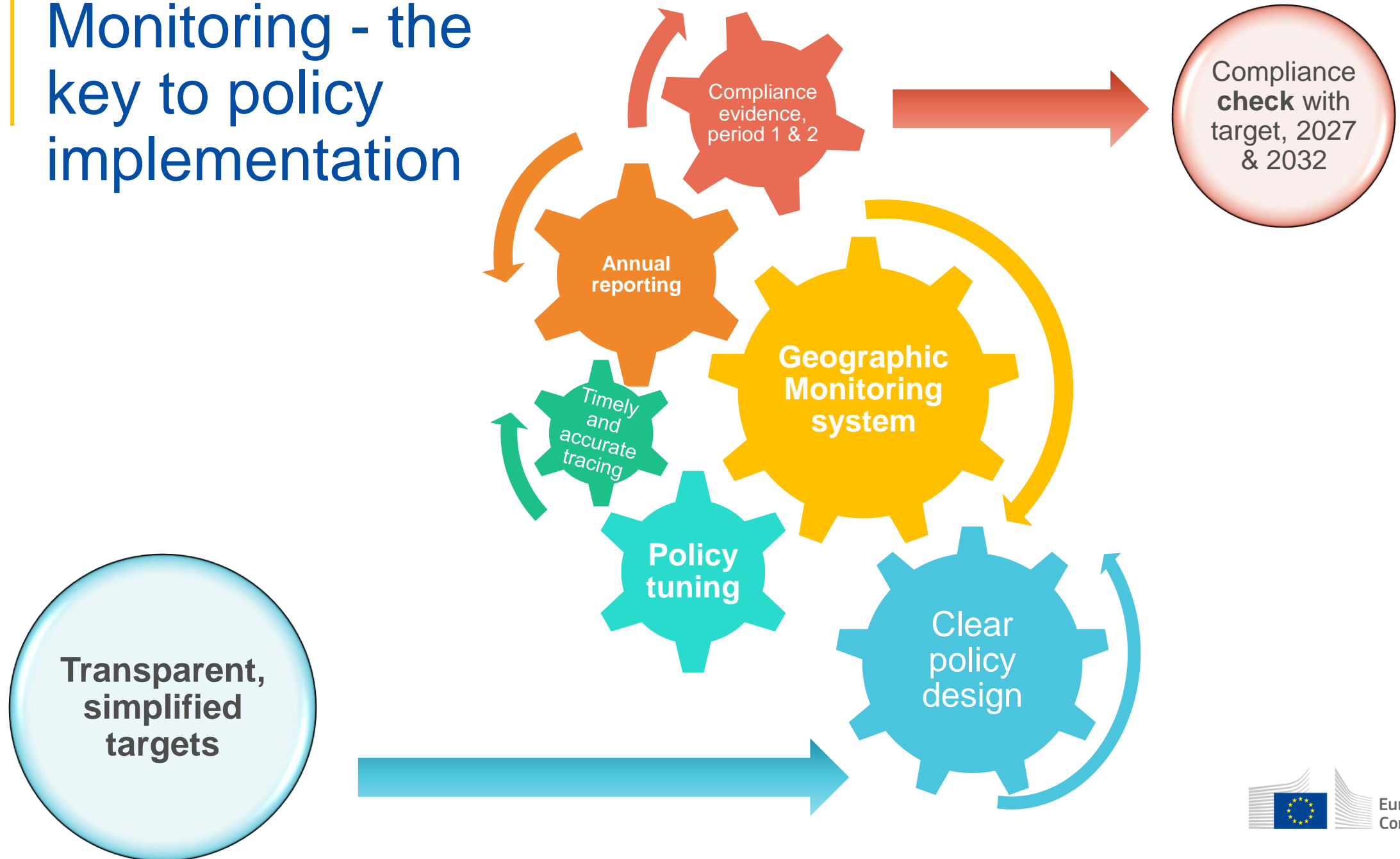


“The greenhouse gas inventory shall enable the exchange and integration of data between the electronic databases and the geographic information systems ...” (Annex V)

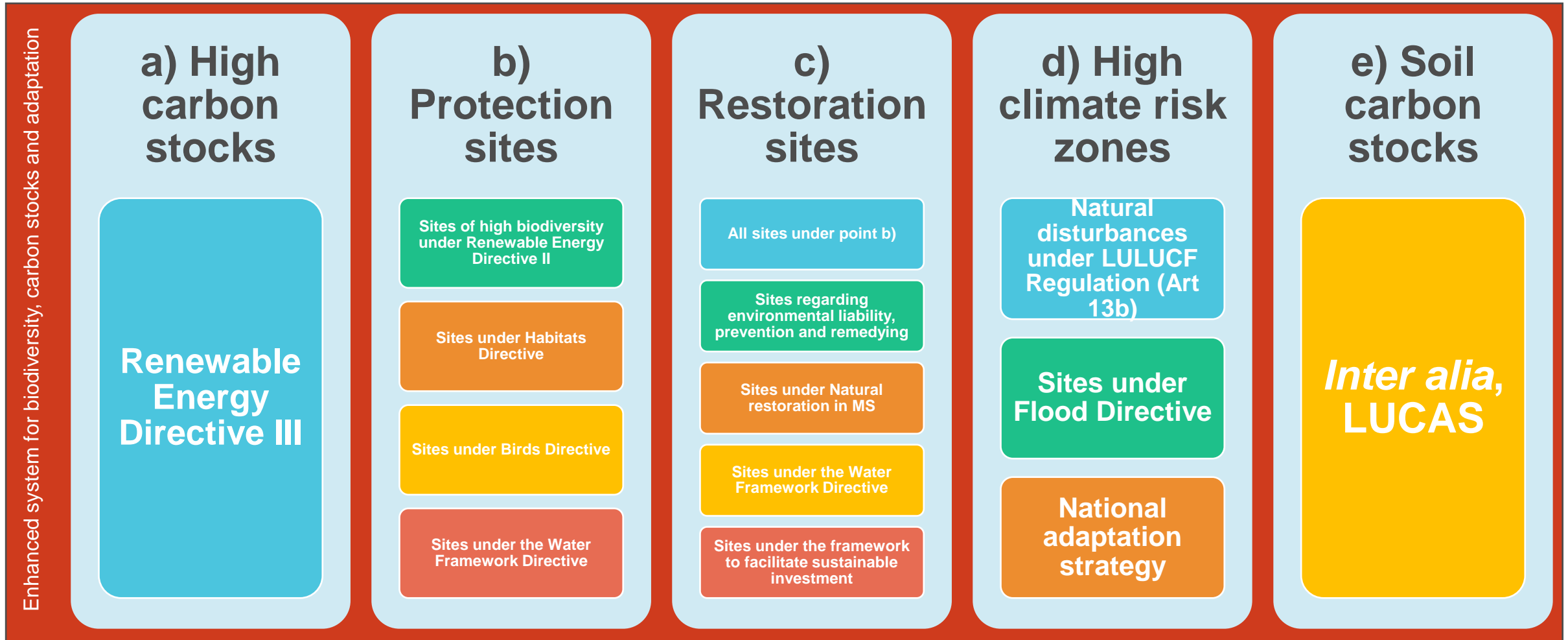
TABLE 4 SECTORAL REPORT FOR LAND USE, LAND-USE CHANGE AND FORESTRY (Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO ₂ emissions/removals (kt)	CH ₄ ^a	N ₂ O ^b	NO _x	CO	NMVOC
A. Forest land	-108973.62	891.06	48.01	27.12	1339.61	1391.45
1. Forest land becoming forest land	-114014.49	100.07	20.30	23.84	106.74	49.44
2. Land converted to forest land	-117010.44	28.14	1.74	17.58	162.74	41.47
3. Land converted to other land	10704.47	1.10	1.47	1.28	22.24	0.17
B. Cropland	1736.71	23.77	1.02	2.60	36.71	2.61
1. Cropland becoming cropland	1889.91	2.81	1.00	2.13	48.74	3.20
2. Land converted to cropland	2722.44	1.10	1.00	1.47	17.71	1.07
3. Cropland becoming other land	-1874.72	-184.72	-1.62	0.60	108.71	2.08
C. Grassland	2029.76	17.74	0.84	1.14	101.49	1.52
1. Grassland becoming grassland	2029.76	17.74	0.84	1.14	101.49	1.52
2. Land converted to grassland	-2029.76	-17.74	-0.84	-1.14	-101.49	-1.52
D. Wetlands^c	4018.41	22.45	1.01	0.70	24.97	1.02
1. Wetland becoming wetland	4018.41	22.45	1.01	0.70	24.97	1.02
2. Land converted to wetland	170.00	1.10	0.01	0.10	1.10	0.10
3. Wetland becoming other land	-4188.41	-1.10	-0.01	-0.10	-1.10	-0.10
E. Other land^d	4018.41	1.10	0.01	0.10	1.10	0.10
1. Other land becoming other land	4018.41	1.10	0.01	0.10	1.10	0.10
2. Land converted to other land	-4018.41	-1.10	-0.01	-0.10	-1.10	-0.10
G. Recreational and green spaces^e	4018.41	1.10	0.01	0.10	1.10	0.10
1. Recreational and green spaces becoming recreational and green spaces	4018.41	1.10	0.01	0.10	1.10	0.10
2. Land converted to recreational and green spaces	-4018.41	-1.10	-0.01	-0.10	-1.10	-0.10
H. Other urban areas^f	4018.41	1.10	0.01	0.10	1.10	0.10

Monitoring - the key to policy implementation



Enhanced LULUCF monitoring system

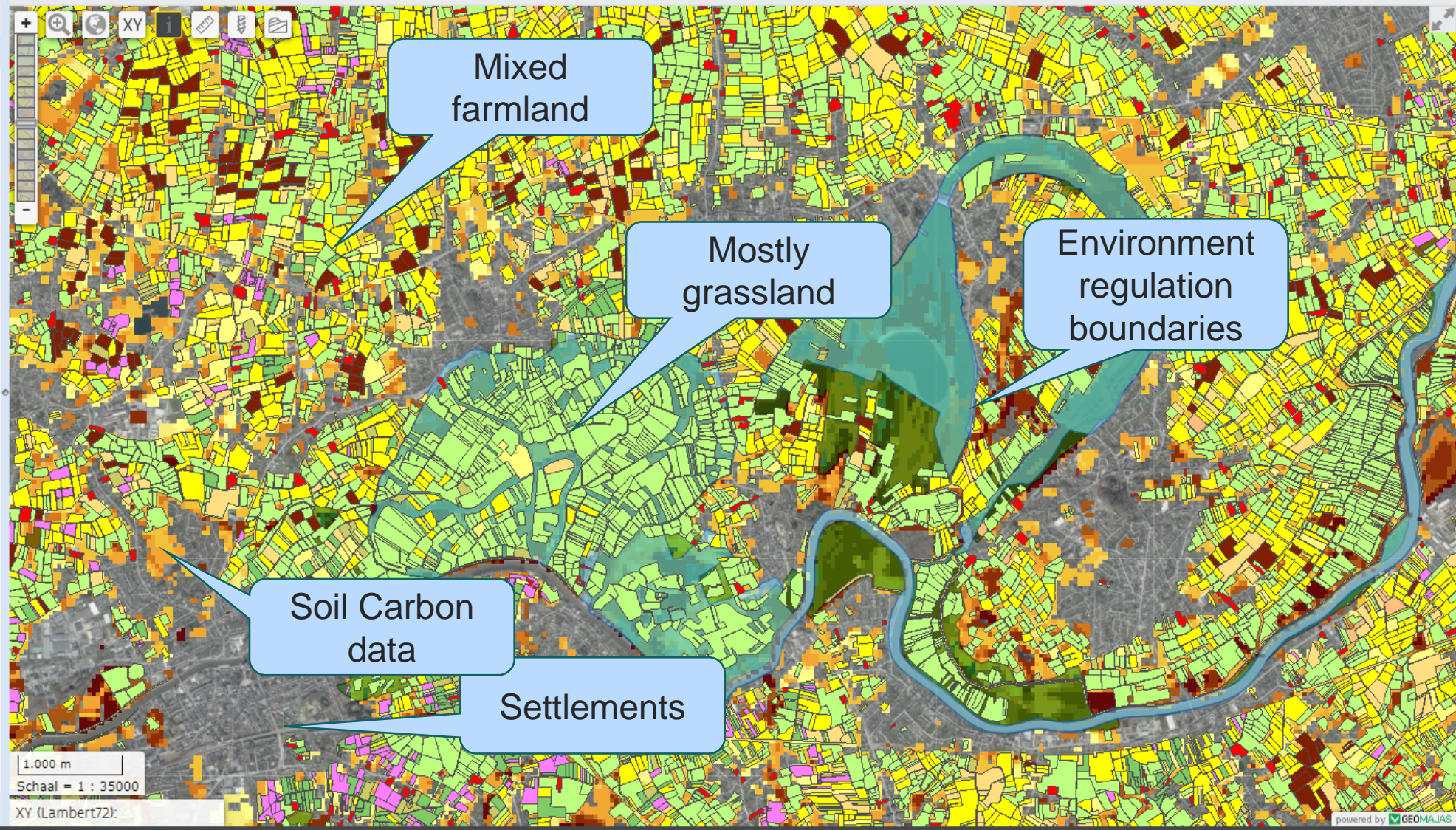


Biodiversity Strategy, Nature Restoration Law

Zoekregels

Kaartbeeld instellen

- Landbouwgebruikspcelen (2020)**
 - Legende
 - Gewasgroep
 - Landbouwinfrastructuur
 - Groenten, kruiden en sierplanten
 - Grasland
 - Voedergewassen
 - Aardappelen
 - Suikerbieten
 - Granen, zaden en peulvruchten
 - Mais
 - Vlas en hennep
 - Overige gewassen
 - Fruit en Noten
 - Houtachtige gewassen
 - Water
- Erkende natuurrezervaten**
 - Legende
 - Erkende natuurrezervaten
- Vogelrichtlijngebieden**
 - Legende
- Habitatrichtlijngebieden**
 - Legende
- Soil Organic Carbon Stock Maps for Belgium: mean (40 m grid)**
 - Legende
- Orthofotomozaïek, middenschallig, winteropnamen, kleur, meest recent, Vlaanderen**
- GRB-basiskaart selectie**





LIFE CarbonCounts

Enabling Carbon
Farming via an
improved
knowledge system

More info [here](#)

Carbon farming scenario analysis at the scale of agricultural parcel (Section 4)

INPUT DATA

Farm scale: Agricultural parcels
Regional scale: Climate, Texture, SOC Sequestration Potential Map

Agricultural parcels (AP)

(contiguous agricultural land homogeneous by cultivation type and management)



AP STRATIFICATION

Intersecting Climate and Texture with AP land use (derived from vector LP map)

AP SOC SEQUESTRATION POTENTIAL

SOC sequestration potential data transfer (initial SOC level (SOC_0), saturation SOC level (SOC_{SAT}), SOC potential accumulation (SOC_{PA})) to the AP database via the identity tool

AP SOC CHANGE SCENARIOS

Merging the scenario database to the AP map via a table join based on the stratum code

Relational database

Land plots (LP)	
ID FARM	1
ID LAND PLOT	79884018
LAND USE	Sowable areas

Cadastral parcel (CP)	
ID CADASTRAL PARCEL	116060
PROVINCE	MI
MUNICIPALITY	Abbiategrasso
MAP SHEET	5
PARCEL	24



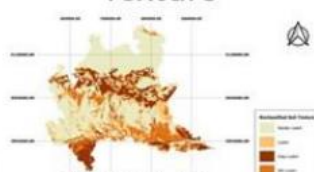
ID FARM	1
ID LAND PLOT	79884018
ID CADASTRAL PARCEL	116060
ID AGRIC PARCEL	71
AREA (m ²)	108945
CLIMATE	3
TEXTURE	4
LAND USE	5
STRATUM	3_4_5
ID SOC CELL	14806
SOC_0 (Mg ha ⁻¹)	47.79
SOC_{sat} (Mg ha ⁻¹)	61.35
SOC_{PA} (Mg ha ⁻¹)	13.35
ΔSOC_{ABS}	a) ORG; b) CC+OA
ΔSOC_{REL}	a) RSD+R; b) CC

Cover crops (CC) - Organic ammentant (OA) - Organic agriculture (ORG)
Maintenance of crop residues (R) - Reduced soil disturbance (RSD)

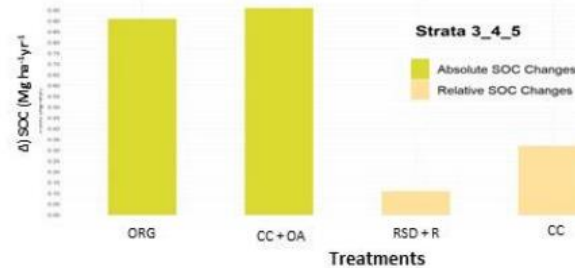
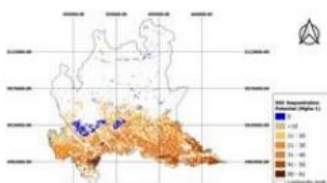
Climate



Texture



SOC SEQUESTRATION POTENTIAL



LIFE C-Farms project:

The project supports the design and implementation of targeted payments for the application of Carbon Farming practices through the development of a regulatory framework for a carbon certification system in collaboration with relevant actors and institutions.

<https://c-farms.eu/>

Thank you!



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.



Useful links

- Certification Removals Carbon proposal: <https://europa.eu/!8mGymM>
- Impact Assessment: https://climate.ec.europa.eu/document/ab53e63b-4b85-4d28-ac67-6bd742506bae_en
- Q&A: https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_7159
- More information on Sustainable Carbon Cycles: https://ec.europa.eu/clima/eu-action/forests-and-agriculture/sustainable-carbon-cycles_en
- Delivering the European Green Deal: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en
- LULUCF regulation revision: <http://data.europa.eu/eli/reg/2023/839/oj>
- LULUCF Impact Assessment: <https://europa.eu/!NG7K6U>