



I prodotti CLMS per la produzione di cartografia LULUCF

Giulia Cecili

VISIONI DAL CIELO
Crescere e imparare con CLMS



PROGRAMME OF THE
EUROPEAN UNION



Progetto AVENGERS

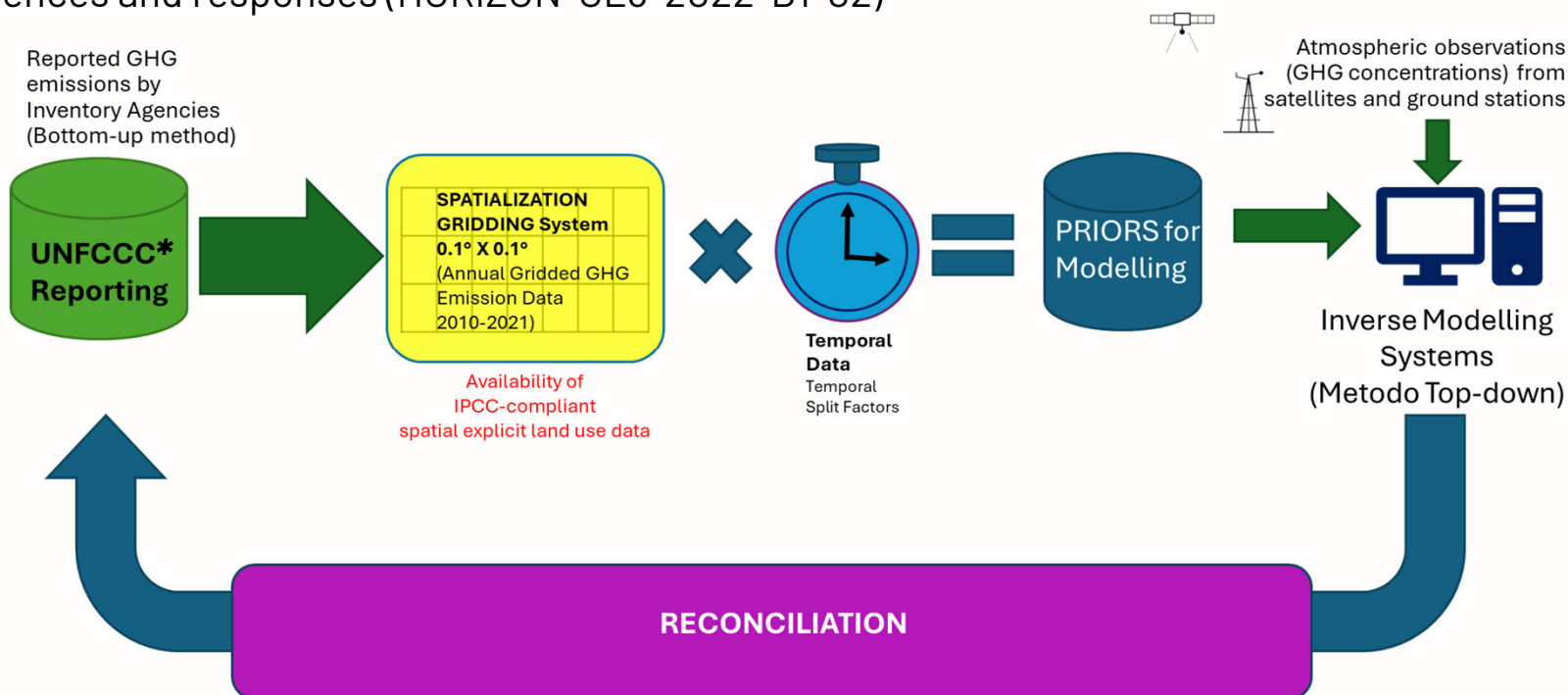


AVENGERS (2023-2026): Attributing and Verifying European and National Greenhouse Gas and Aerosol Emissions and Reconciliation with Statistical Bottom-up Estimates

"Climate sciences and responses (HORIZON-CL5-2022-D1-02)"

Regolamento LULUCF (EU 2018/841):

- Obiettivi di assorbimento netto di carbonio
- Dati spazialmente espliciti



* UNFCCC: United Nations Framework Convention on Climate Change

Progetto AVENGERS



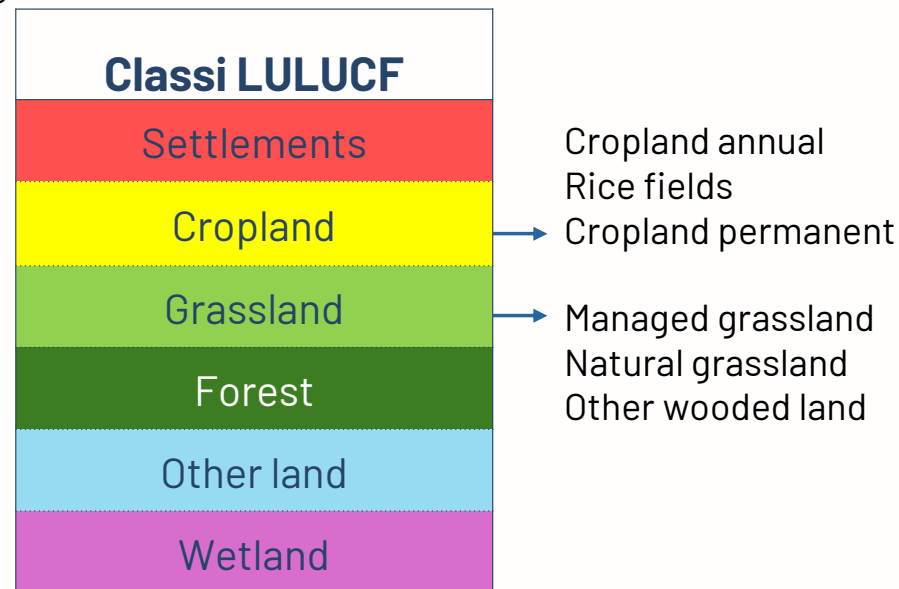
AVENGERS (2023-2026): Attributing and Verifying European and National Greenhouse Gas and Aerosol Emissions and Reconciliation with Statistical Bottom-up Estimates

"Climate sciences and responses (HORIZON-CL5-2022-D1-02)"

OBIETTIVO

Produzione di una mappa di land use a partire dai principali dati del Copernicus Land Monitoring Service (CLMS), in grado di migliorare la spazializzazione delle emissioni e degli assorbimenti di gas serra nel settore LULUCF.

*Categorie di uso del suolo definite dall' IPCC**



* IPCC: Intergovernmental Panel on Climate Change

Progetto AVENGERS



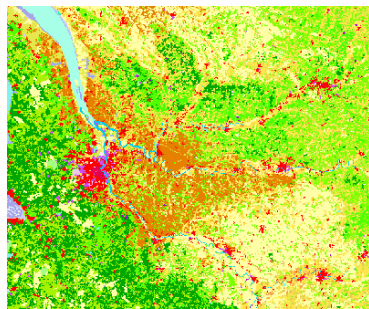
AVENGERS (2023-2026): Attributing and Verifying European and National Greenhouse Gas and Aerosol Emissions and Reconciliation with Statistical Bottom-up Estimates

4 agenzie degli inventari + modellisti atmosferici

Part. No.	Participant organisation name	Country
1 Coordinator	LUNDS UNIVERSITET (ULUND)	Sweden
2	THE INVERSION LAB (iLab)	Germany
3	ISPRA	Italy
4	RIVM	The Netherlands
5	UNIVERSITAET HEIDELBERG (UHEI)	Germany
6	CMCC	Italy

7	TNO	The Netherlands
8	ICOS ERIC	Finland
9	UMWELTBUNDESAMT (UBA)	Germany
10	SVERIGES LANTBRUKS-UNIVERSITET (SLU)	Sweden
11	EMPA	Switzerland
12	SRON	The Netherlands
13 Co-Coordinator	STICHTING VU (VUA)	The Netherlands

Dati di input



CORINE Land Cover

Uso e Copertura • vettoriale •
MMU 25 ha • 44 classi



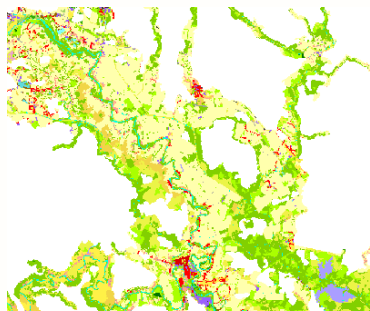
CLCplus Backbone

Copertura • raster • 10 m •
11 classi



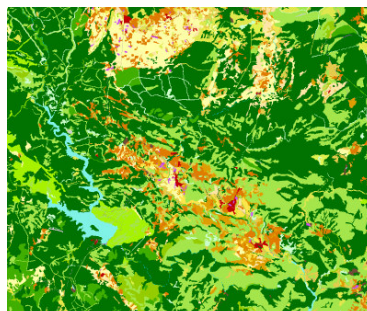
Crop Types

Tipologie culturali • raster •
10 m • 19 classi



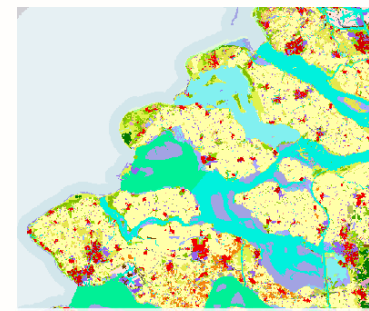
Riparian Zones

Uso e Copertura • Aree ripariali •
raster • 10 m • 55 classi



Protected Areas

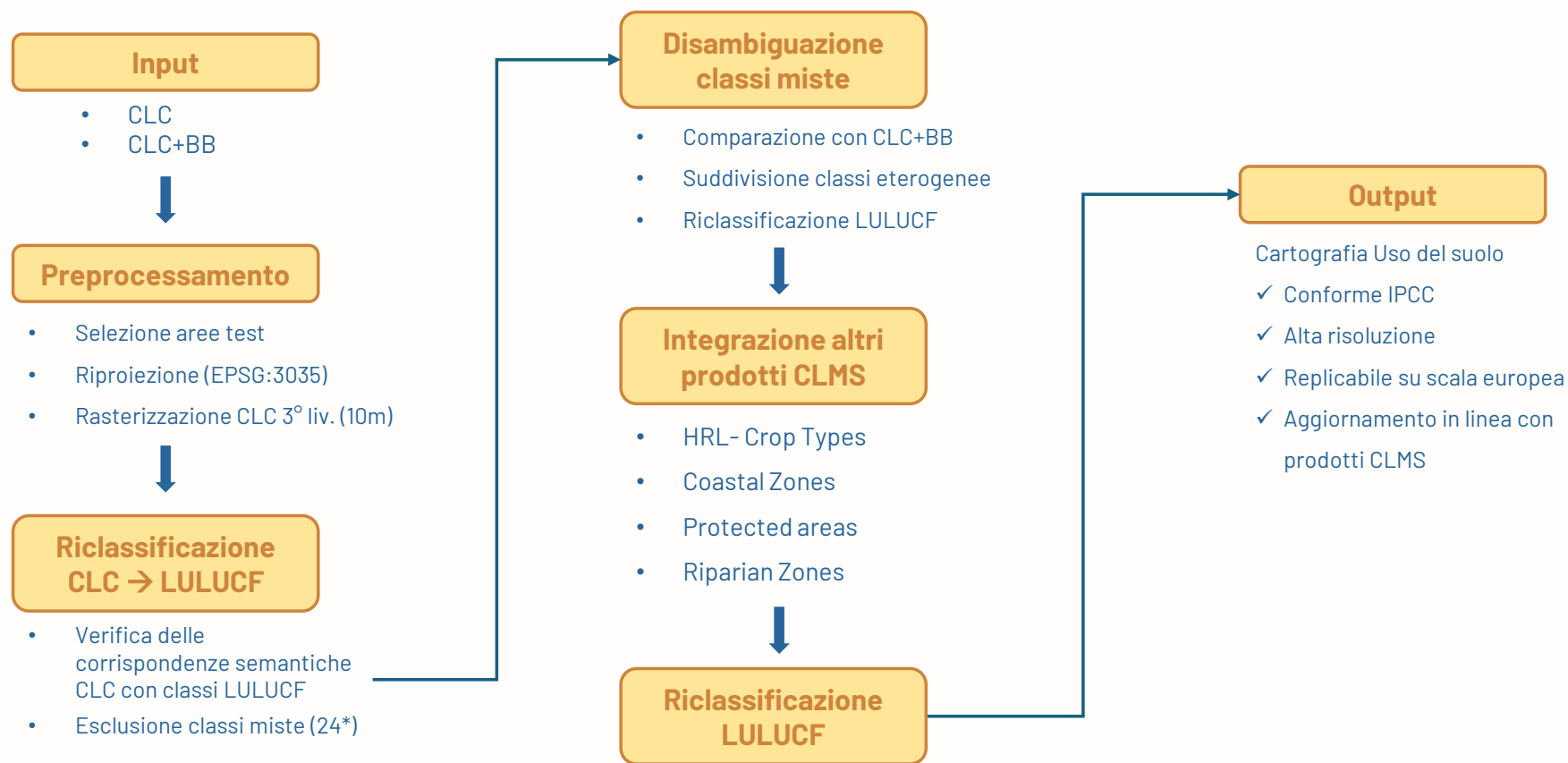
Uso e Copertura • Aree protette •
raster • 10 m • 55 classi



Coastal Zones

Uso e Copertura • Aree costiere •
raster • 10 m • 55 classi

Metodologia



Metodologia

Input

- CLC
- CLC+BB



Preprocessamento

- Selezione aree test
- Riproiezione (EPSG:3035)
- Rasterizzazione CLC 3° liv. (10m)



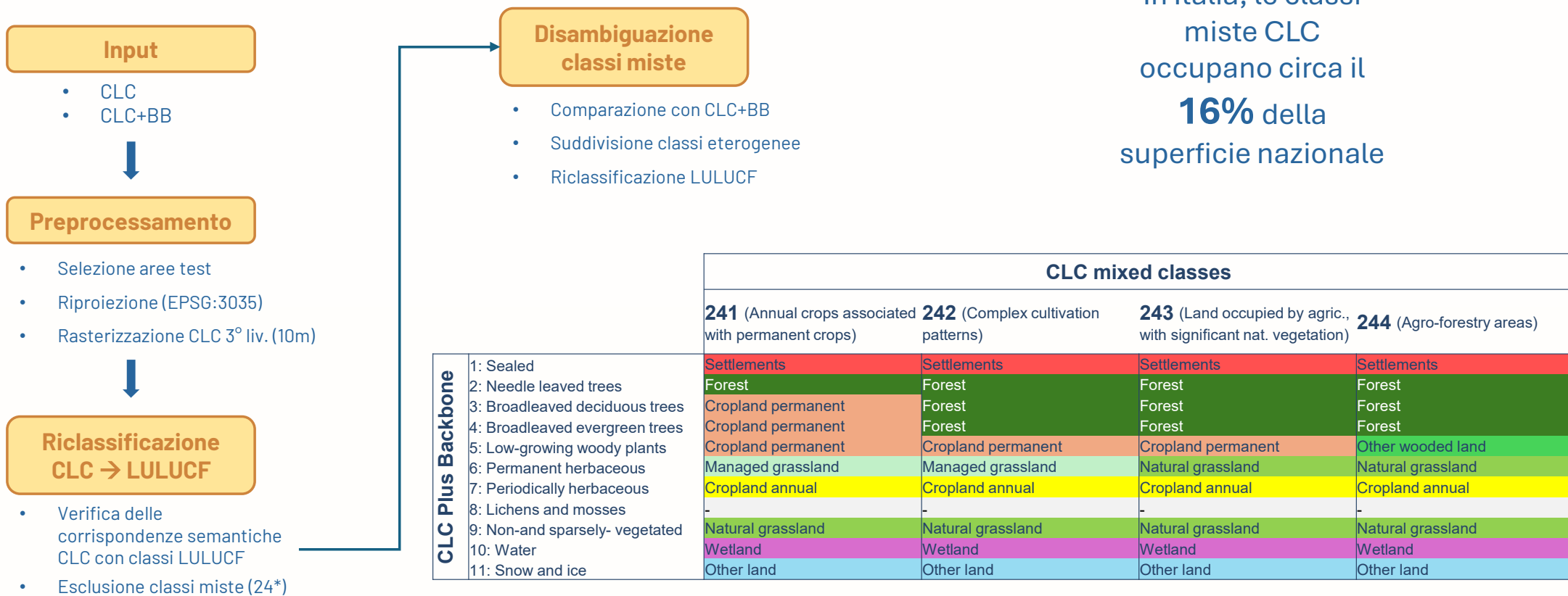
Riclassificazione CLC → LULUCF

- Verifica delle corrispondenze semantiche CLC con classi LULUCF
- Esclusione classi miste (24*)

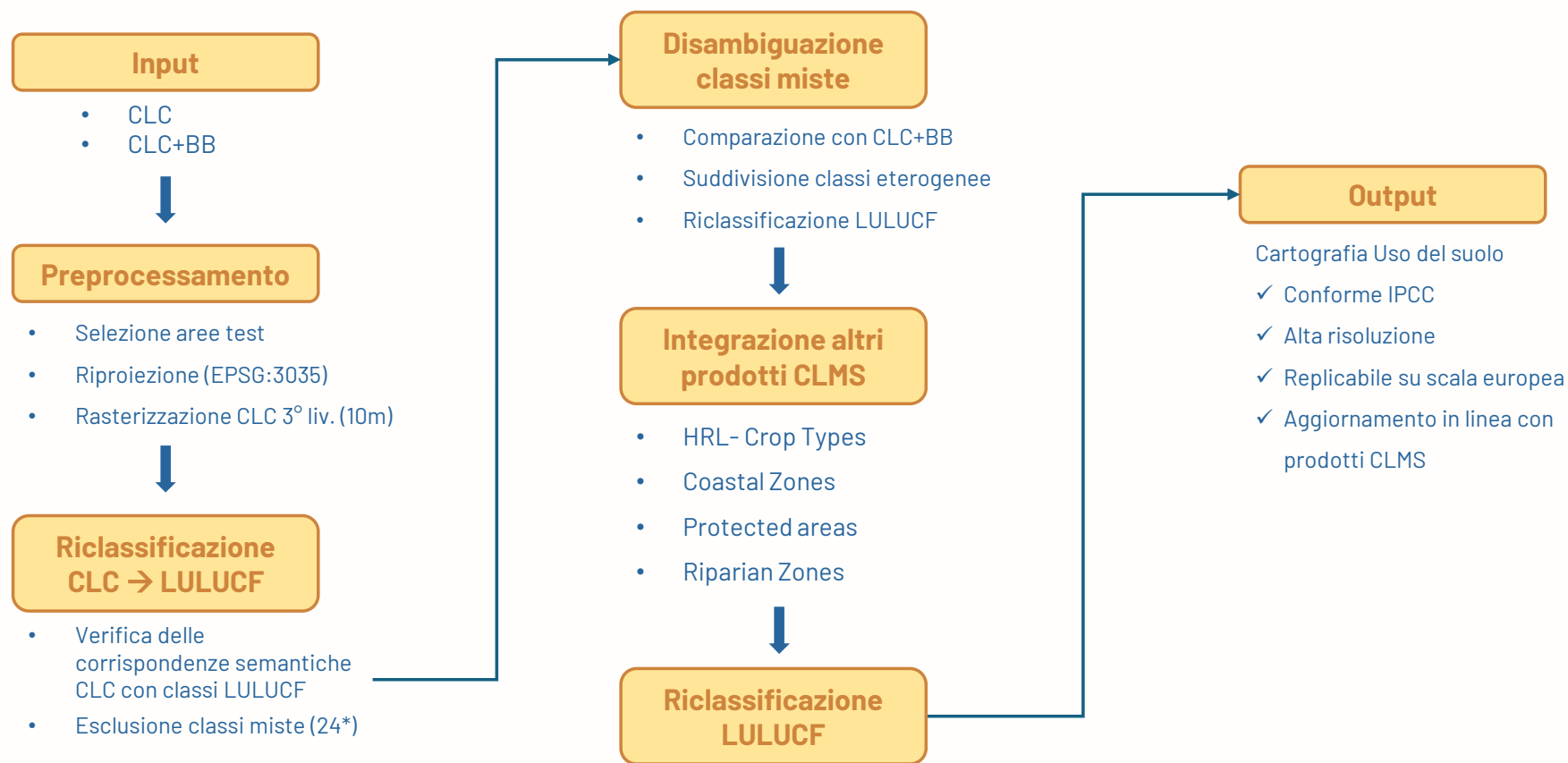
Matrice di corrispondenza tra le classi CLC-LULUCF

	Classi LULUCF	Corrispondenza CLC
1	Settlements (SL)	111, 112, 121, 122, 123, 124, 131, 132, 133, 141, 142
2	Cropland annual (ACL)	211, 212
3	Rice fields	213
4	Cropland permanent (PCL)	221, 222, 223
5	Managed grassland (GM)	231
6	Natural grassland (NGL)	321, 333
7	Other wooded land (OWL)	322, 323, 324
8	Forest (FL)	311, 312, 313, 334
9	Other land (OL)	331, 332, 335
10	Wetland (WL)	411, 412, 421, 422, 423, 511, 512, 521, 522

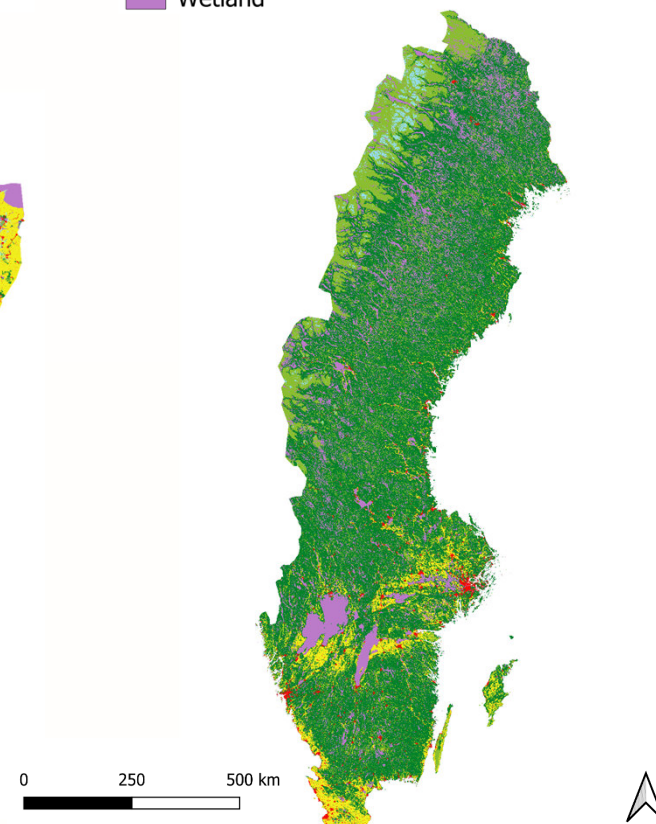
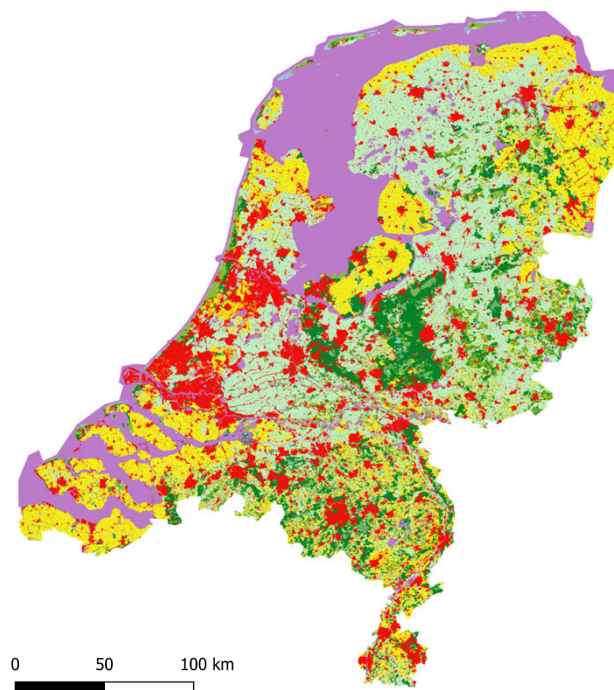
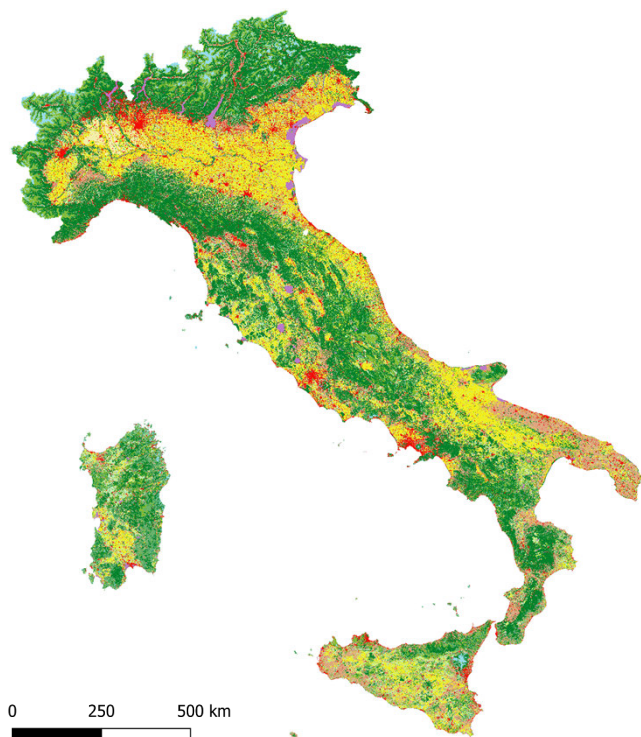
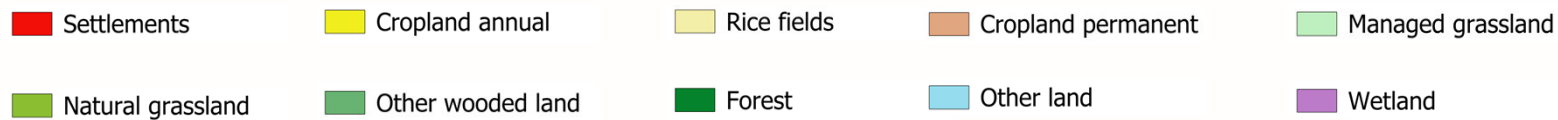
Metodologia



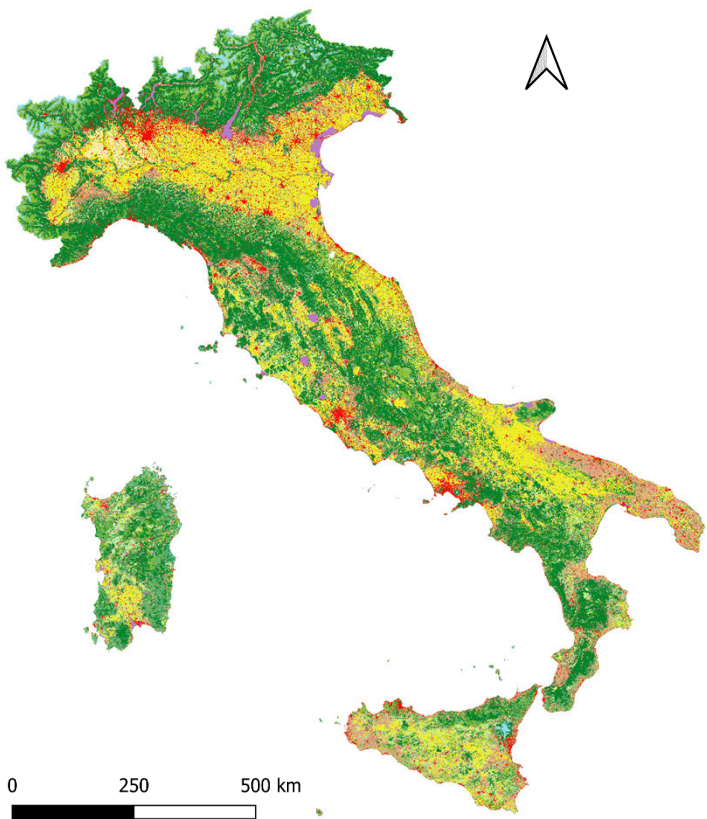
Metodologia



Risultati



Risultati



Classi	Inventario nazionale 2019 (sub 2025)	Mappa AV
	% su sup tot	% su sup tot
Settlements	7,64	7,80
Cropland annual	20,92	20,22
Rice fields	0,73	0,62
Cropland permanent	8,22	9,95
Managed grassland	11,25	10,94
Natural grassland	7,21	8,22
Other wooded land	6,88	6,53
Forest	33,03	32,07
Other land	2,17	1,83
Wetland	1,94	1,82



GRAZIE

VISIONI DAL CIELO

Crescere e imparare con CLMS



PROGRAMME OF THE
EUROPEAN UNION

