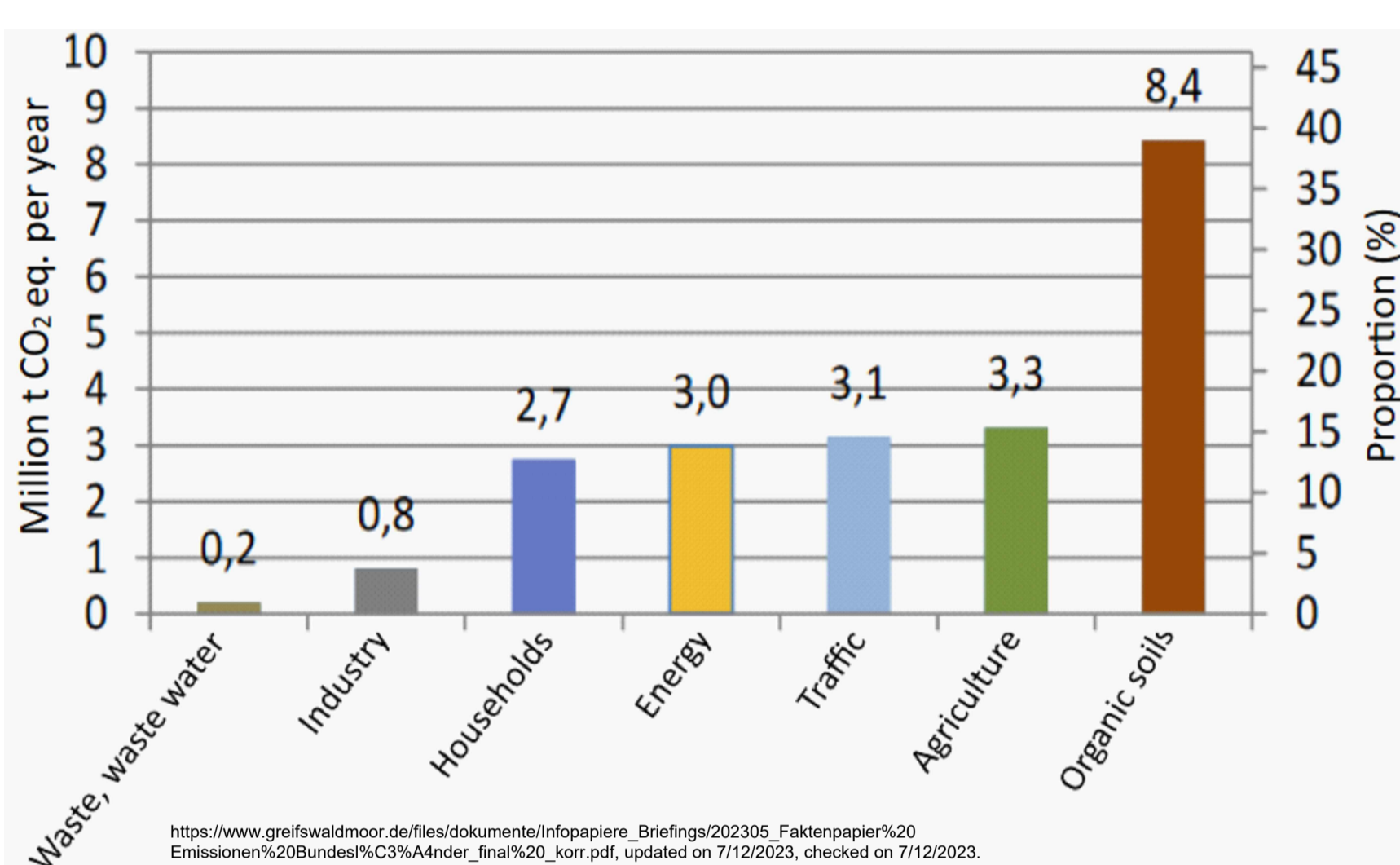


# Climate change mitigation with waterbuffalos

## 1. Emissions Peatlands and Livestock

"Peatlands occupy only 3% of the world's land area, but contain twice as much carbon in their peat [...] as the total biomass of all the world's forests." (Joosten 2009).

### Emissions from peatlands in Mecklenburg-Western Pomerania



In a federal state rich in peatlands such as Mecklenburg-Western Pomerania, drained peatlands are the largest single source of greenhouse gases. (1).

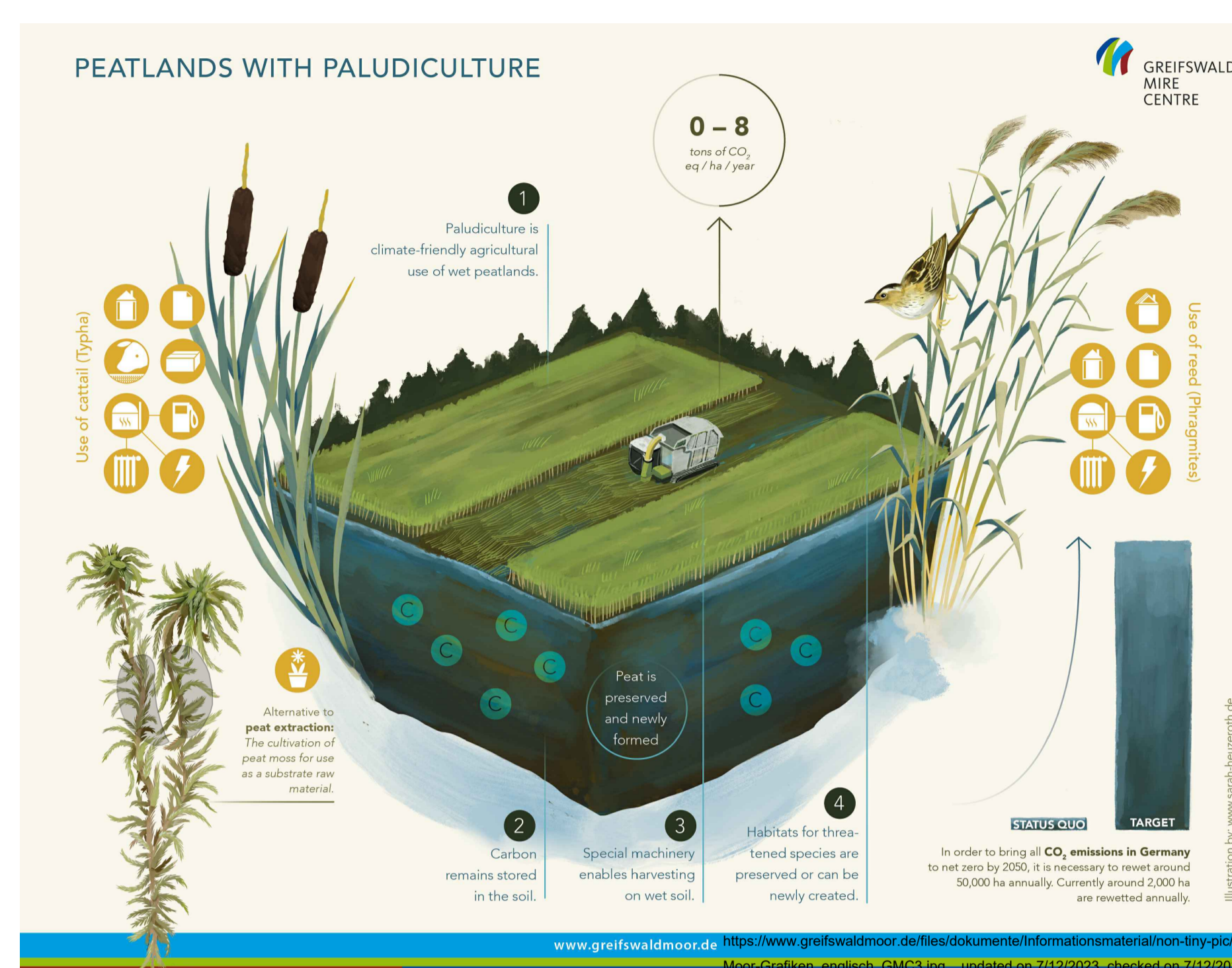
**69.5%** representing **5.2%**  
of agricultural emissions came from animal husbandry alone in 2022, of Germany's total emissions.

In 2022, around 38.6 million t CO<sub>2</sub>-equivalent GHG emissions were attributable to direct livestock farming alone (2).

### Water levels and climatic effect on peat consumption or peat conservation in used peatlands

Management	Mean water level in the peatland	Emission margins in t CO <sub>2</sub> -eq. per ha*a	Climate impact
peat consuming (high)	Deeply drained peatland: summer water level lower than 45 cm below ground level	~20 – 50	High to very high GHG emissions
peat consuming (low)	Summer water level: about: 10 to 45 cm below ground level	~5 – 20	reduced GHG emissions
peat conservation	Summer water level <10 cm1 below ground level	~0 – 8	Maximum possible climate protection

## 2. Mitigation Waterbuffalo grazing

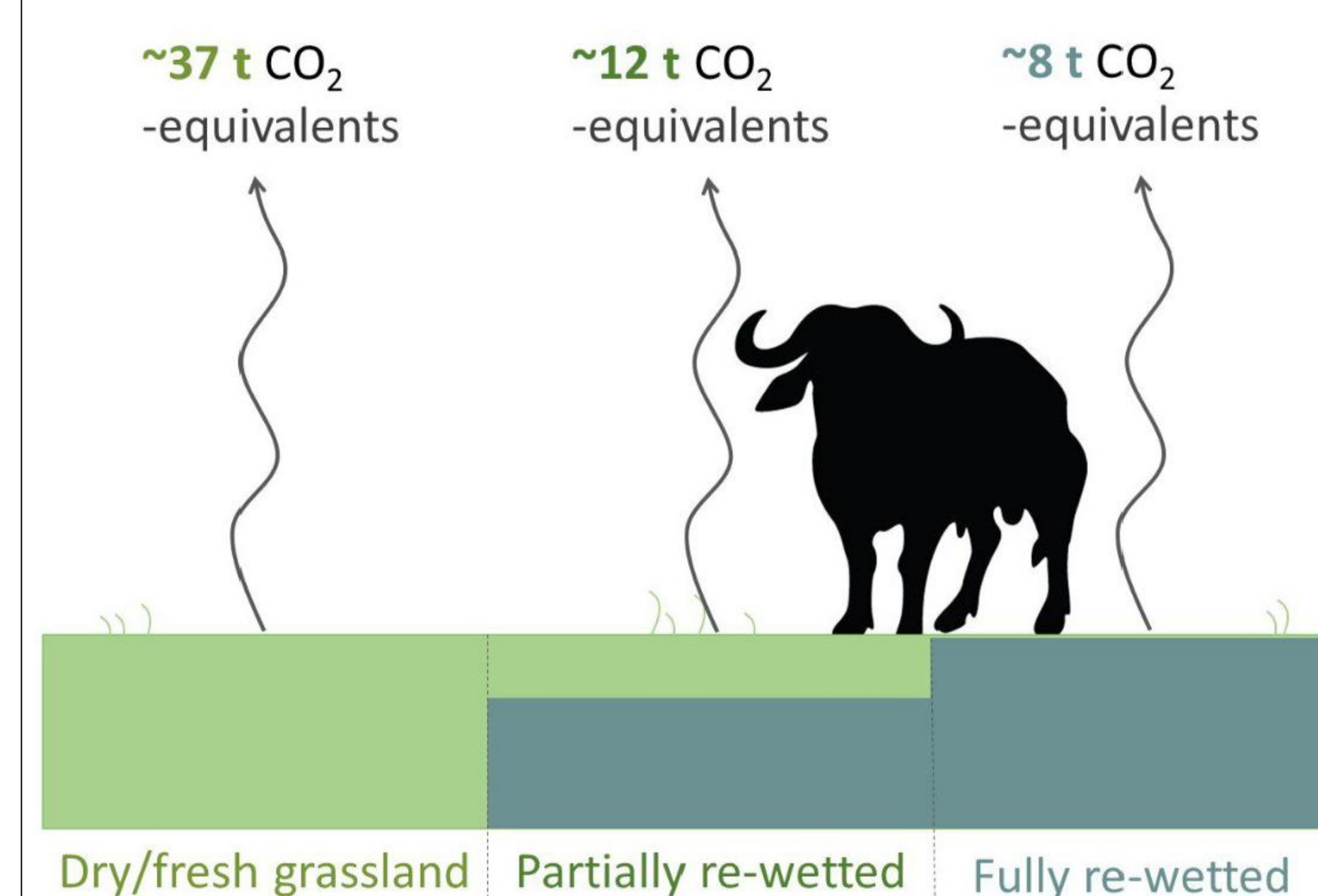


Paludiculture is a method of wet management of peatlands with peat conservation or peat formation. (3)

„In every [re-wetting] scenario the site emissions [on buffalo pastures] are lower compared to management procedures on drained grassland.“ (Kaiser et al., 2021)



### The wetter the grasland, the lower the emissions.



## 3. Implementation Climate Farming

### Mire climate farmers



I provide climate protection services by cultivating my wet peatlands with i.e. water buffalos, because like that I reduce greenhouse gas emissions (4).

I need recognition for this and require economic incentives that make it attractive to shift to paludiculture and make it economically viable for my farm (4).

### Husbandry conditions of Water buffalos: Advantages and Challenges for farmers.

Advantages	Challenges
Broad nutritional spectrum	Supplemental feeding in winter
Fodder and water requirements similar to cattle	
High fodder conversion	
Winter resistant (-20°C with dry conditions)	Susceptible to heat stress Need for wallows
Adaptable to environment	Conflict between re-wetting and minimum requirements for firm ground
Low costs of use	High factor costs
Established practice in landscape conservation and maintenance	

### EU Funding Framework

Currently, EU agricultural policy is perverted with respect to peatlands: Direct payments incentivize drainage-based intensive land use rather than restoration. Water buffalo are a wet land use option that is already subsidized, unlike other paludiculture (5).

“Buffalo grazing [...] combines positive effects of ecological stock management with economically viable meat production, assuming an effective grazing and herd management.” (vgl. Smeets, Kanswohl & Müller, 2013)

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