Mining the Atmosphere We Act Now!

June 2024

How Does RECOAL Work?

Three steps

Waste Biomass

Wet waste biomass with the fixed CO_2 is the raw material for the CO_2 removal.

Hydrothermal Carbonization

The wet waste biomass is processed with hydrothermal carbonization (**HTC**) into a **stable hydrochar**.

Geological Storage

The hydrochar is **geologically stored**. All storage sites are permanently sealed and monitored.

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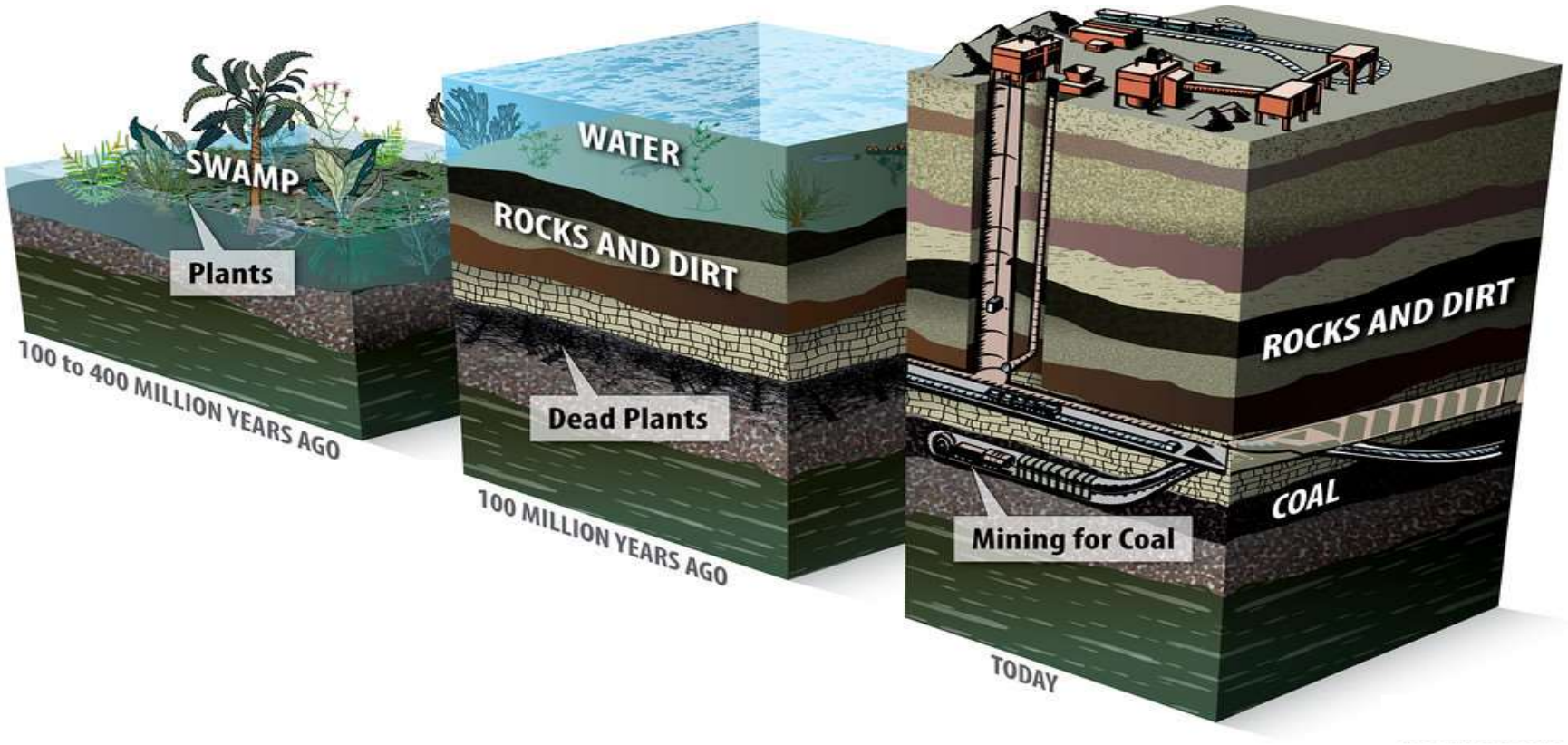
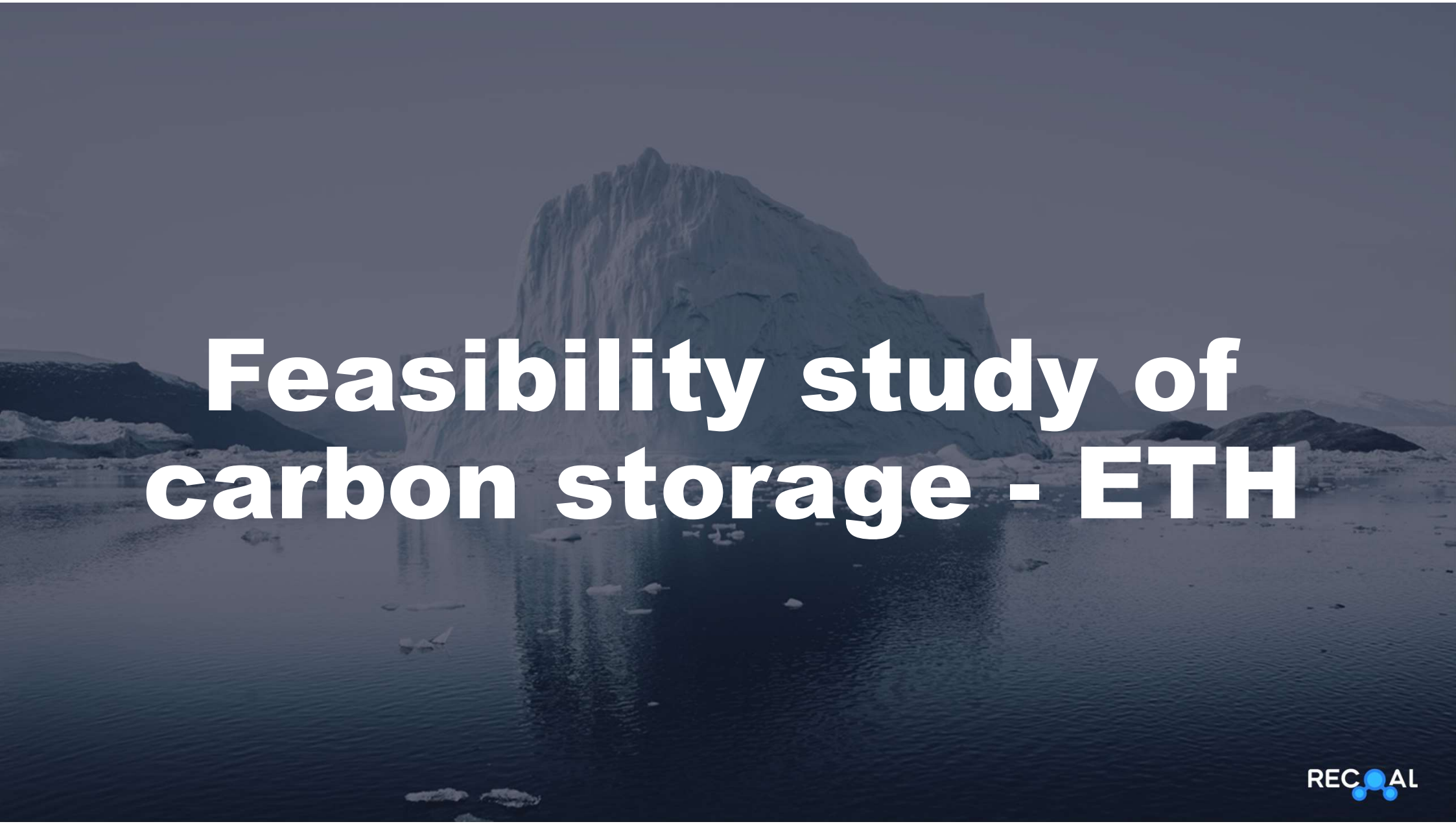
Reverse carbon mining



Source: Let's learn geology; 2023; Coal Formation


Feasibility study of carbon storage - ETH

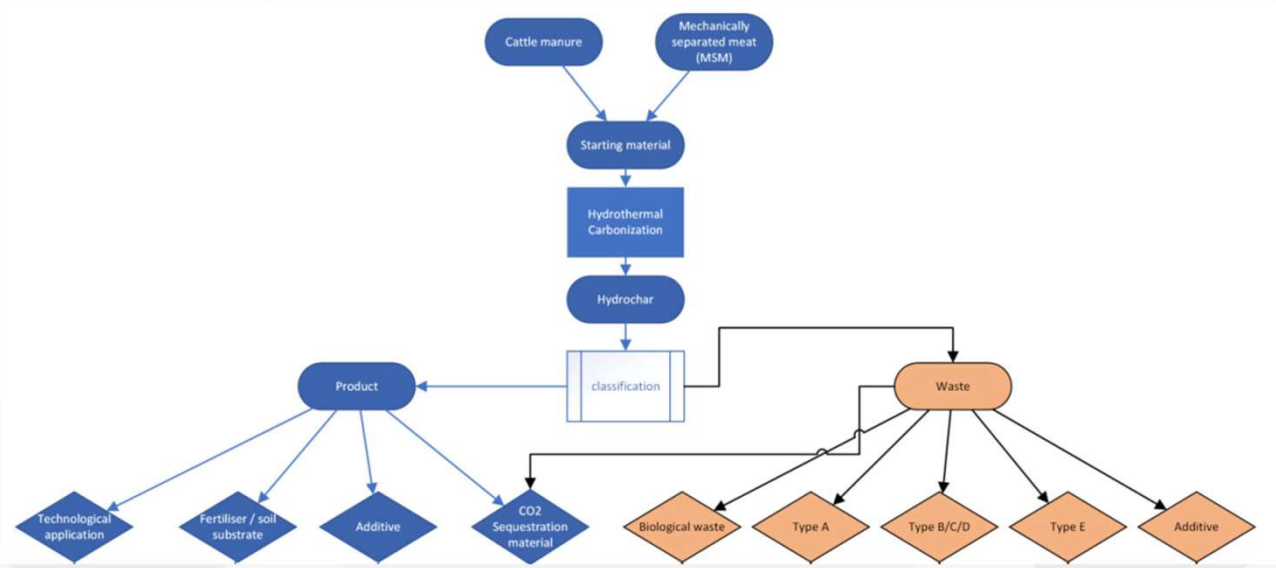
ETH study

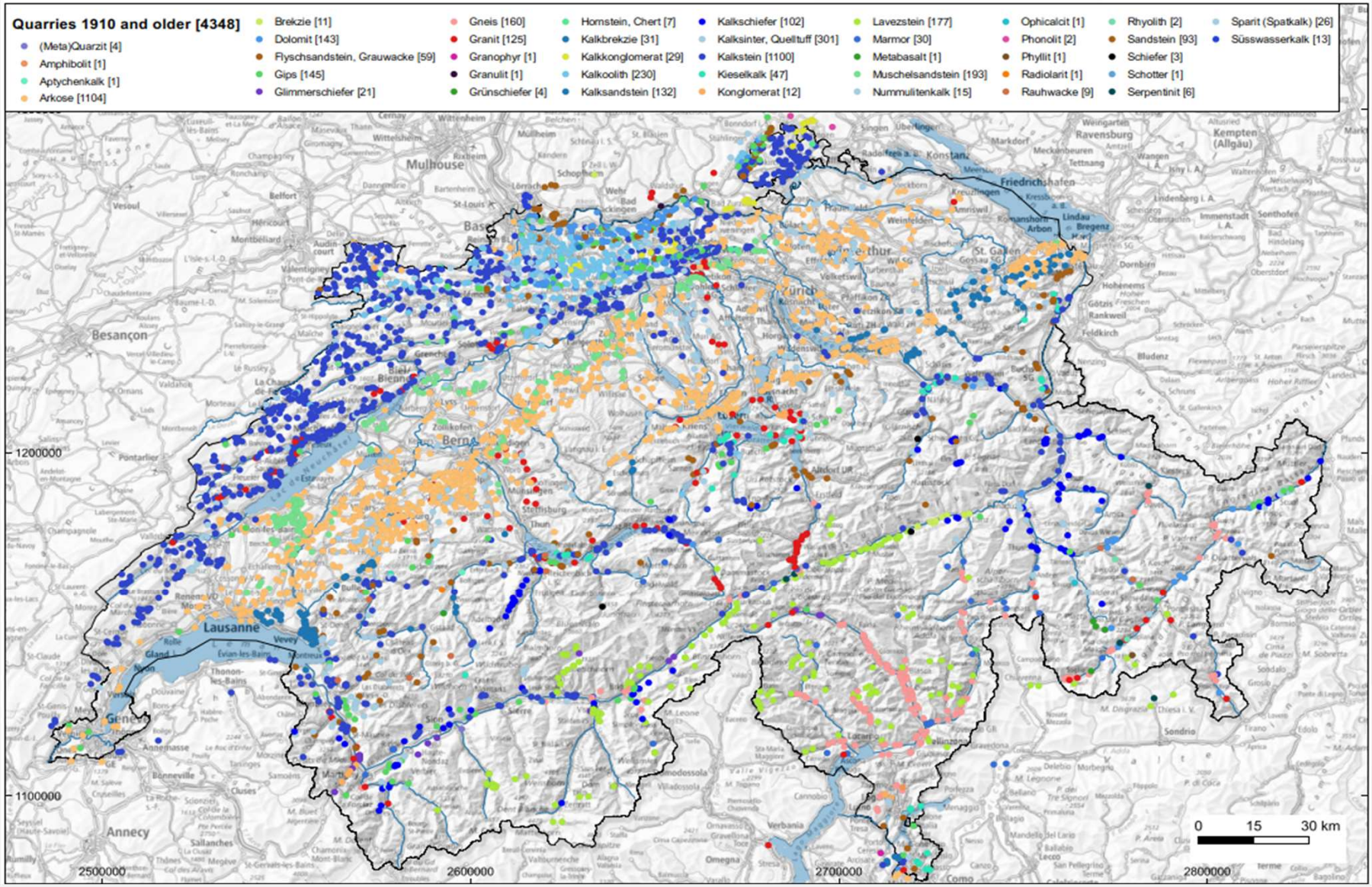
Site evaluation for the long-term storage of hydrochar in Switzerland - A feasibility study

Scenarios for the classification of Hydrochar

Target:

Classify as a product and not as waste





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Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

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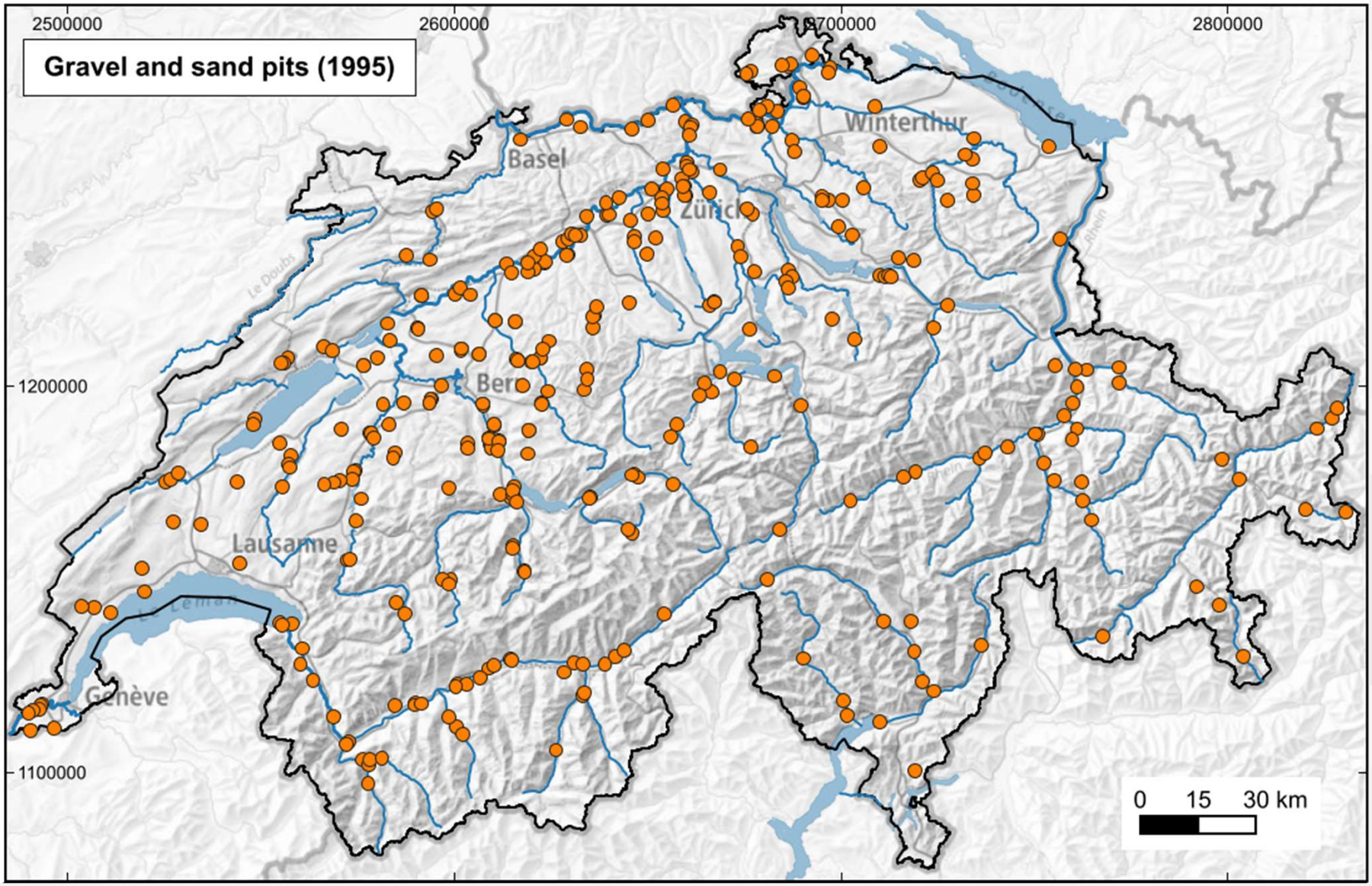

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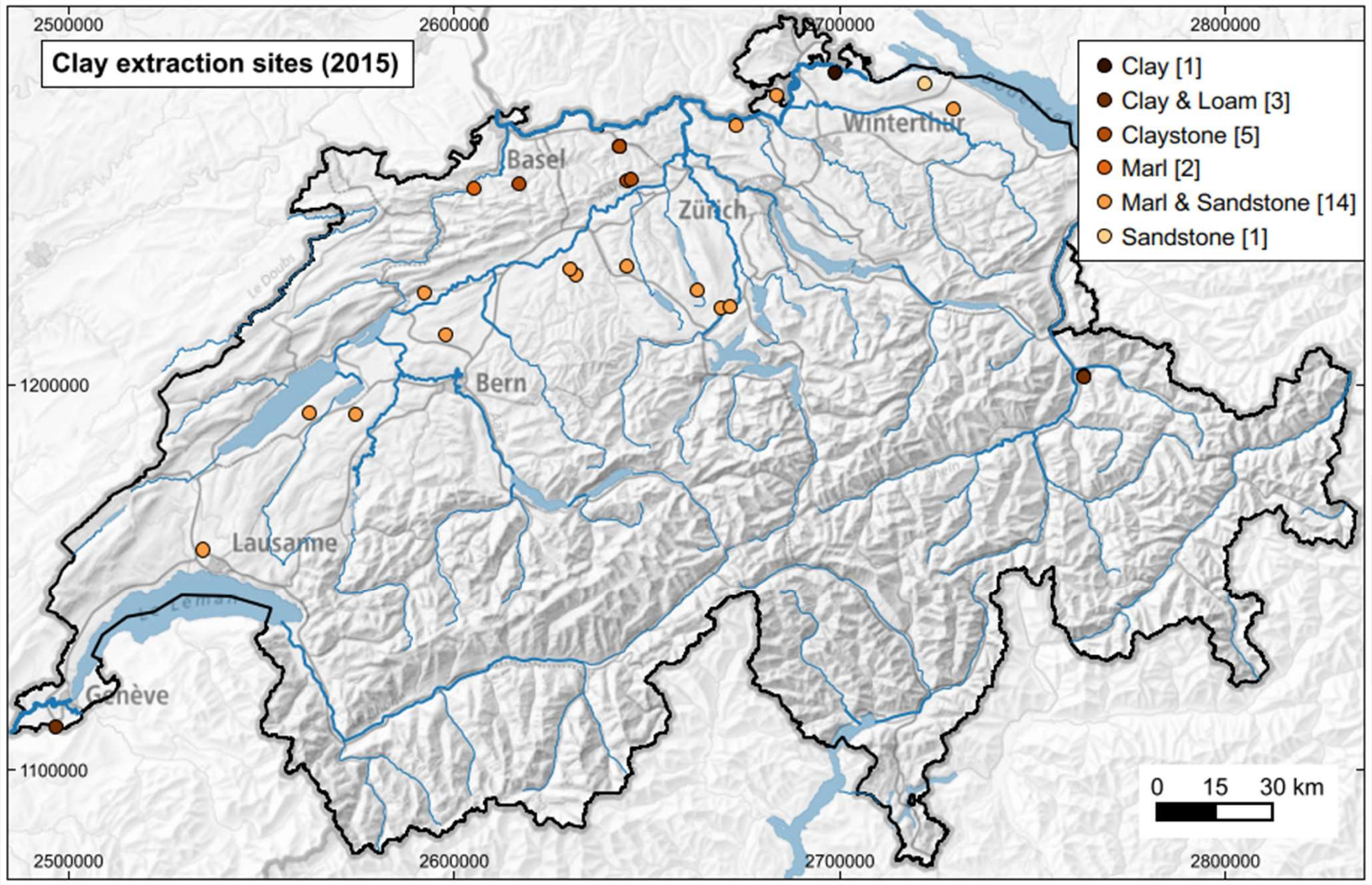

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Feasibility study of carbon storage – TU Delft

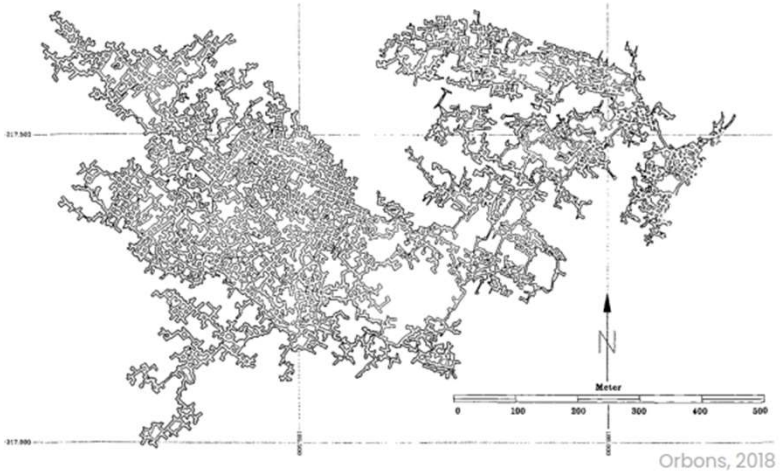
TU Delft study

Feasibility of hydrochar storage in the Dutch, shallow and deep subsurfaces

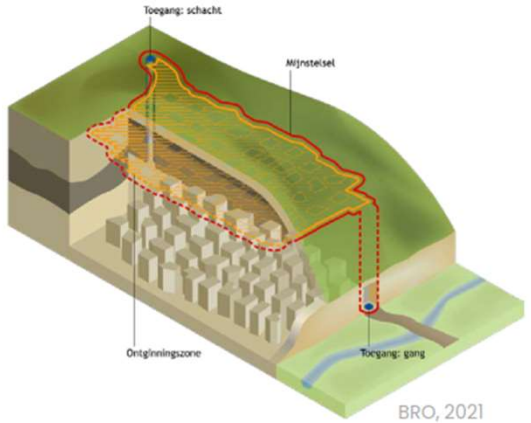
Limestone caves

Total volume < 1 million m^3

Cultural heritage and usage



Orbons, 2018



BRO, 2021

Natuurmonumenten, 2023

TU Delft study

Feasibility of hydrochar storage in the Dutch, shallow and deep subsurfaces

Onshore sandpits

Volume 1-3 million m^3 average pit

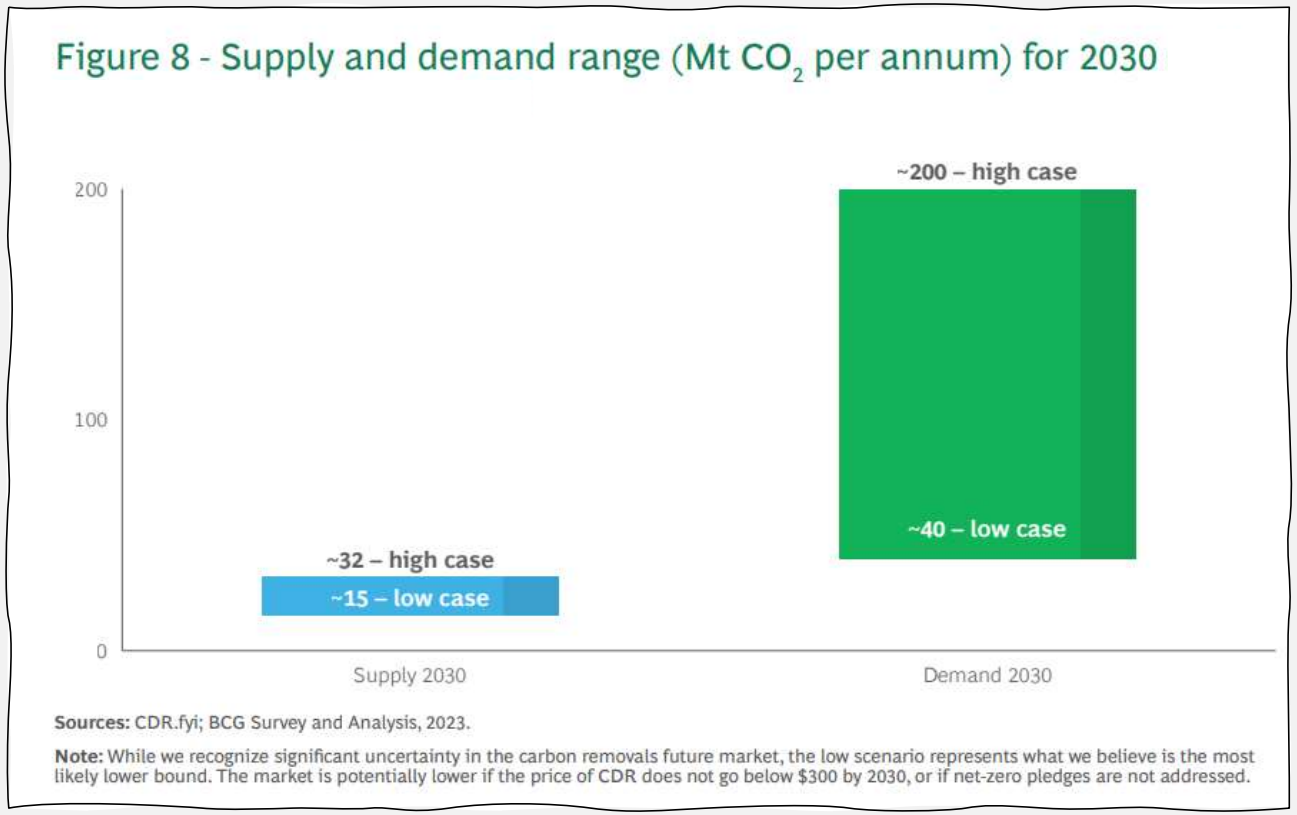
Dredging material dumping common

Hydrological effect and stability of material?

Location	Volume [$10^6 m^3$]	Infill [%]
Gamerensche Waars	0.6	84
Veenoordkol	0.6	54
Rosandeplas	1.1	52
Betuweplas	0.8	71
Koornwaard Heukelum	0.5	50
Noorderhoek	0.8	26
Plas Helsingen Vianen	0.2	57
Grote Veenderplas Barneveld	0.3	4

Voluntary Carbon Market (VCM) Outlook 2030

Demand is far greater than supply



A market opportunity of 40 to 200 Mt of removed CO_2 per year.

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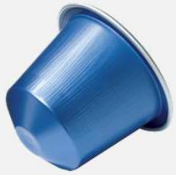
Operations



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