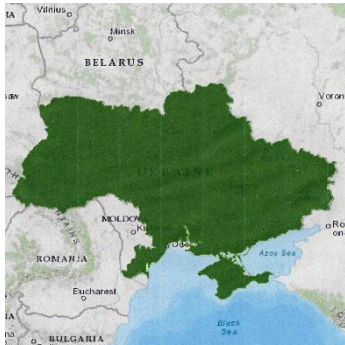


UKRAINE



Source: esri

General

Ukraine is located in Eastern Europe. It is bordered by Russia in the North-east, Belarus in the North, Poland, Slovakia and Hungary in the West, and Romania, Moldova and the Black Sea in the South. In 1991, Ukraine gained its independence from the Soviet Union. Ukraine is categorised as a developing country and alongside Moldova the poorest country in Europe in terms of gross domestic product (GDP) per capita. However, because of its extensive fertile farmlands, Ukraine is one of the world's largest grain exporters. The country has an area of 60.4 Mha (million hectares) with, in 2022, a population of 39.7 million, or 0.66 persons per ha (Wikipedia and United Nations, 2022).

Climate and geography

Ukraine has a mostly temperate climate, with the exception of the southern coast of Crimea, which has a subtropical climate. The climate is influenced by moderately warm, humid air coming from the Atlantic Ocean. Average annual temperatures range from 5.5 – 7 °C in the North, to 11 – 13 °C in the South. Precipitation is disproportionately distributed; it is highest in the West and North and lowest in the East and Southeast. Western Ukraine, particularly in the Carpathian Mountains, receives around 1,200 mm of precipitation annually, while Crimea and the coastal areas of the Black Sea receive around 400 mm.

The landscape of Ukraine consists mostly of fertile plains and plateaus, crossed by rivers such as the Dnieper, Seversky Donets, Dniester and the Southern Bug as they flow South into the Black Sea and the smaller Sea of Azov. To the South-west, the Danube Delta forms the border with Romania. Ukraine's various regions have diverse geographic features ranging from the highlands to the lowlands.

The country faces a number of major environmental issues such as air- and water-pollution and deforestation, as well as radiation contamination in the North-east from the 1986 accident at the Chernobyl Nuclear Power Plant.

As much as two-thirds of the country's surface land consists of the so-called black earth, a resource that has made Ukraine one of the most fertile regions in the world and well known as a *breadbasket*. These soils may be divided into three broad groups:

- in the North a belt of the so-called deep Chernozems, about 1.5 metres thick and rich in humus;
- south and east of the former, a zone of prairie, or ordinary, Chernozems, which are equally rich in humus but only about 0.9 metres thick;
- the southernmost belt, which is even thinner and has still less humus.

Interspersed in various uplands and along the northern and western perimeters of the deep Chernozems are mixtures of gray forest soils and podzolized black-earth soils, which together cover much of Ukraine's remaining area. All these soils are very fertile when sufficient water is available. However, their intensive cultivation, especially on steep slopes, has led to widespread soil erosion and gullying. The smallest proportion of the soil cover consists of the chestnut soils of the southern and eastern regions. They become increasingly salinized to the South as they approach the Black Sea.

Existing polders

The Group Polder Development (1982) states that the polder area in Ukraine is 172,100 ha.

The World Wildlife Fund (2003) shows polders along the Kiliya Branch of the Danube in the Danube Delta (Figures 1 and 2).

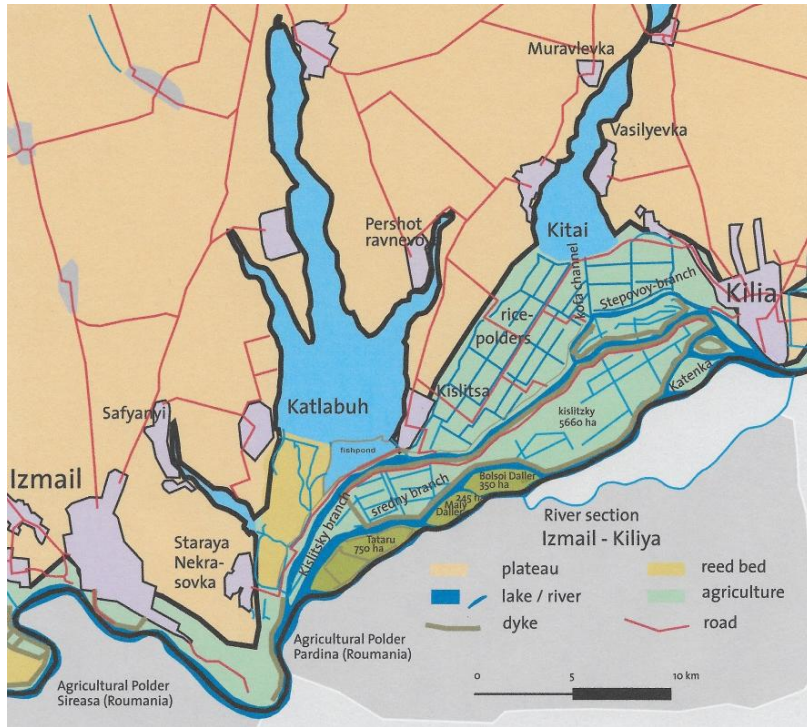


Figure 1. Polders along the Kiliya Branch of the Danube River between Izmail and Kiliya (World Wildlife Fund, 2003)

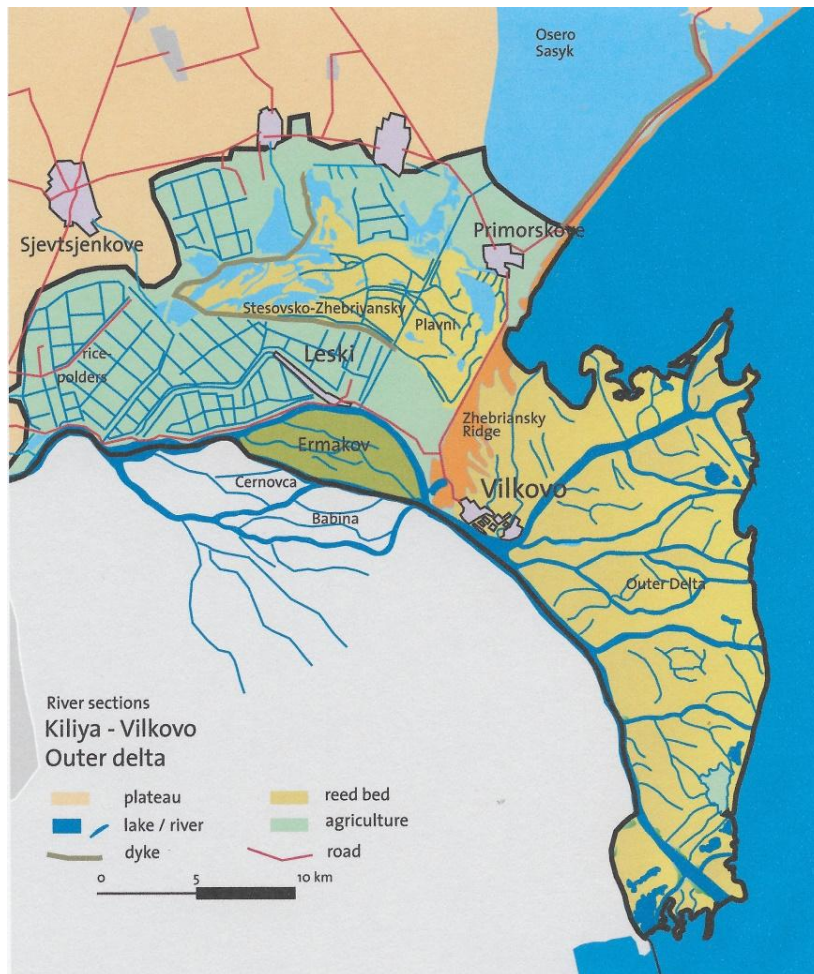


Figure 2. Polders along the Kiliya Branch of the Danube River between Kiliya and the Black Sea (World Wildlife Fund, 2003)

General characteristics of the polders in Ukraine are shown in Table I.

Proposed polders

No proposed polders have been identified.

Location of the polders in Ukraine as shown on the World polder map

The location of the polders in Ukraine is shown in Figure 3.

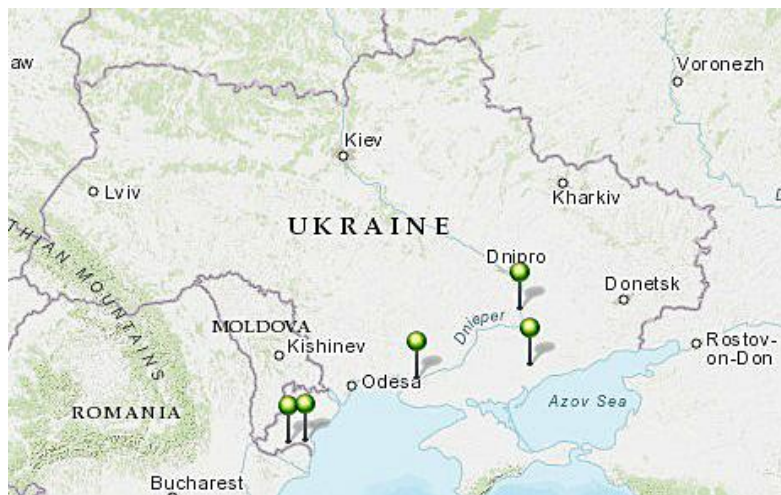


Figure 3. Location of the polders in Ukraine (source: esri – Batavialand)

References

- Group Polder Development, Department of Civil Engineering, Delft University of Technology, 1982. *Polders of the World. Compendium of polder projects*. Delft, the Netherlands.
- United Nations, Department of Economic and Social Affairs, Population Division. 2022. *World population prospects, medium prognosis. The 2022 revision*. New York, USA.
- World Wildlife Fund, 2003. *A Vision for the Danube Delta, Ukraine*. <http://www.wildernis.eu/pdf/danubedelta/Danube-Delta-english.pdf>.

Bart Schultz

Lelystad, February 2024

Table I. General characteristics of existing polders in Ukraine

Name	Reclamation	Area in ha	Type *)	Latitudes	Longitudes	Elevation in m+MSL	Land use
Cherson	1788-1800		RLL	46° 35' N	32° 19' E	5	Agriculture
Chortitza	1804-1806		RLL	47° 49' N	35° 7' E	52	Agriculture
Along the Molotsjna River	1855		RLL	46° 50' N	35° 24' E	5	Agriculture
Polder between Izmail and Kiliya			RLL	45° 24' N	29° 8' E	-2	Agriculture
Polder between Kiliya and Black Sea			RLL	45° 28' N	29° 27' E	-1	Agriculture
Total		172,100					

*) RLL = reclaimed low-lying land; LGS = land gained on the sea; DL = drained lake