

Soil maps of Europe

Map Legend

International boundary	
Major road	
Major river	
National capital	ROMA (ROME)
Locality (by population)	
1 000 000 – 5 000 000	MILANO (MILAN)
250 000 – 1 000 000	Verona
100 000 – 250 000	Novara
25 000 – 100 000	Verbania
10 000 – 25 000	Ispra

How does the legend work?

A legend is intended to ease the understanding of a soil map and consists typically of a symbol or a series of symbols within a specific colour repeated on the map sheets and consistent over all the maps presented. It is followed by the name of the dominant soil in the mapping unit, the characteristics of which can be deduced from the tables included in the soil classification section.

The symbols used in the legend are those that appeared on the original Soil Map of Europe at 1:1 million scale in 1985. However, since then the soil classification scheme has changed and the names of the units represented have been reclassified in the World Reference Base. This may have led to small errors in boundaries between some units, while the correlation itself between the two systems may not be perfect in places. The colours corresponding with each Reference Soil Group are those used by the Food and Agriculture Organization (FAO), with slight modifications.

Example: Gmc Calcari-mollic Gleysol

The colour of all Gleysols is dark blue and they are all having the symbol G indicating the dominant soil in the unit. (Note that not all Reference Soil Groups in the legend have the same letter symbol as some have been correlated with different soil types due to differences between the soil classification used).

All mapping units with the symbol Gmc would have as dominant soil Calcari-mollic Gleysols characterized by a high water table for a long time during the year, being calcareous between 20 and 50 cm depth and having a nutrient- and organic carbon-rich, dark coloured topsoil.

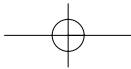
WRB Major Reference Group Legend

	Acrisol
	Albeluvisol
	Andosol
	Anthrosol
	Arenosol
	Calcisol
	Cambisol
	Chernozem
	Cryosol
	Fluvisol
	Kastanozem
	Gleysol
	Gypsisol
	Histosol
	Leptosol
	Luvisol
	Phaeozem
	Planosol
	Podzol
	Regosol
	Solonchak
	Solonetz
	Umbrisol
	Vertisol

Codes for soil types on regional maps

A	Acrisol
Ag	Gleyic Acrisol
Ah	Humic Acrisol
Ao	Haplic Acrisol
D	Albeluvisol
Dd	Haplic Albeluvisol
De	Endoeutric Albeluvisol
Dg	Gleyic Albeluvisol
Dge	Endoeutric-gleyic Albeluvisol ¹
Dgs	Stagnic Albeluvisol
To	Acroxic Andosol
Tg	Gleyic Andosol
Th	Umbric Andosol
Tha	Haplic Andosol
Tv	Vitric Andosol
ATc	Terric Anthrosol
ATa	Arenic Anthrosol
Q	Arenosol
Qa	Albic Arenosol
Qc	Haplic Arenosol
Qcc	Calcaric Arenosol
Qcd	Dystric Arenosol
Ql	Lamellic Arenosol
Qld	Dystri-lamellic Arenosol
Bcl	Luvic Calcisol
Bk/Bkh	Haplic Calcisol
Bkv	Vertic Calcisol
Xk	Aridic Calcisol
Bc	Chromic Cambisol
Bcc	Chromi-calcaric Cambisol
Bd	Dystric Cambisol
Bda	Dystri-andic Cambisol
Be	Eutric Cambisol
Bea	Eutri-andic Cambisol
Bef	Eutri-fluvic Cambisol

Beg	Eutri-gleyic Cambisol
Bev	Eutri-vertic Cambisol
Bg	Gleyic Cambisol
Bgc	Calcaric-gleyic Cambisol
Bgg	Stagnic Cambisol
Bgv	Gleyi-vertic Cambisol
Bkf	Calcaric-fluvic Cambisol
Bv	Vertic Cambisol
Bvc	Calcaric-vertic Cambisol
Ba/Bec/Ec	Calcaric Cambisol
Bx	Gelic Cambisol
Geh	Eutri-stagnic Cambisol
Gs	Stagnic Cambisol
C	Chernozem
Ch	Chernic Chernozem
Ck/Ckc	Calcic Chernozem
Ckb	Vermi-calcic Chernozem
Ckcb	Vermi-calcic Chernozem
Cl	Luvic Chernozem
Gx	Gleyic Cryosol
Rx	Haplic Cryosol
Jc/Jcf	Calcaric Fluvisol
Jcg	Calcaric-gleyic Fluvisol
Jd	Dystric Fluvisol
Jdg	Histic Fluvisol
Je/Jef	Eutric Fluvisol
Jeg	Eutri-gleyic Fluvisol
Jm	Mollic Fluvisol
Jmg	Molli-gleyic Fluvisol
Jt	Thionic Fluvisol
Gc	Calcaric Gleysol
Gd	Dystric Gleysol
Gds ¹	Dystri-stagnic Gleysol
Ge	Eutric Gleysol
Gef	Eutri-fluvic Gleysol
Ges ¹	Eutri-stagnic Gleysol



Soil maps of Europe

Gev	Eutri-vertic Gleysol
Gfm	Fluvi-mollic Gleysol
Gh/Ghh ²	Humic Gleysol
Gm	Mollic Gleysol
Gmc	Calcari-mollic Gleysol
Gmf	Fluvi-mollic Gleysol
Gtz	Thionic Gleysol
Xy	Aridic Gypsisol
Od	Dystric Histosol
Oe	Eutric Histosol
Ox	Gelic Histosol
Kh	Haplic Kastanozem
Kk	Calcic Kastanozem
Kkb	Vermi-calcic Kastanozem
Kl	Luvic Kastanozem
E	Leptosol
Eh/Eo	Rendzie Leptosol
l	Lithic Leptosol
lc/lch	Calcari-lithic Leptosol
ld	Dystri-lithic Leptosol
le	Euri-lithic Leptosol
lm	Molli-lithic Leptosol
lo	Hapli-lithic Leptosol
lu	Umbri-lithic Leptosol
Lgs/Gls	Stagnic Luvisol
La	Albic Luvisol
Lc	Chromic Luvisol
Ler	Rhodic Luvisol
Lcv	Chromi-vertic Luvisol
Ldg	Dystri-gleyic Luvisol
Lf	Ferrie Luvisol
Lg/Lgp	Gleyic Luvisol
Lga	Albi-gleyic Luvisol
Lk	Calcic Luvisol
Lkc	Chromi-calcic Luvisol
Lker	Rhodi-calcic Luvisol

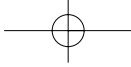
Lo	Haplic Luvisol
Lv	Vertic Luvisol
Lvk	Calci-vertic Luvisol
Hc/Hcb	Calcari Phaeozem
Hcf	Calcari-fluvic Phaeozem
Hcn	Sodic Phaeozem
Hg	Gleyic Phaeozem
Hgc	Calcari-gleyic Phaeozem
Hgs	Stagnic Phaeozem
Hh/Ho	Haplic Phaeozem
HI/Lh	Luvic Phaeozem
Hlv	Luvi-vertic Phaeozem
Mo	Greyic Phaeozem
Wd	Dystric Planosol
We	Eutric Planosol
Wev	Eutri-vertic Planosol
Wm	Mollic Planosol
Pg	Gleyic Podzol
Pgh	Histic Podzol
Pgs	Stagnic Podzol
Ph	Carbic Podzol
Phf/Po	Haplic Podzol
Pl	Episkeletic Podzol
Plh/Pof	Skeleti-umbrie Podzol
Poh	Rustic Podzol
Pp	Placic Podzol
Rc	Calcari Regosol
Rd	Dystri Regosol
Re	Eutric Regosol
Rl	Lepti Regosol
Z	Solonchak
Zg	Gleyic Solonchak
Zo	Haplic Solonchak
Sg	Gleyic Solonetz
Sm	Mollic Solonetz
So	Haplic Solonetz

Sof	Fluvic Solonetz
U	Umbrisol
Bh	Haplic Umbrisol
Ud	Lepti Umbrisol
Qh	Arenic Umbrisol
Bds	Endoskeletal Umbrisol
Vcc	Calcari-chromic Vertisol
Vc	Chromic Vertisol
Ve	Eutric Vertisol
Vg	Gleyic Vertisol
Vk	Calcic Vertisol
Vp	Pellic Vertisol
Vpc	Calcari-pellic Vertisol
Vpg	Gleyi-vertic Vertisol
	Urban
sdm	Soil disturbed by man
	Water body
m	Marsh
g	Glacier
r	Rock outcrops



¹ Recent re-evaluation of this soil type has lead to a re-classification as Stagnic Cambisol, because of slowly permeable subsoil that causes stagnating water to create a perched watertable.

² Recent re-evaluation of this soil type has lead a re-classification as Stagnic Umbrisol in the British Islands, where they have slowly permeable subsoil causing a perched watertable.



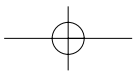
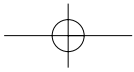
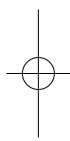
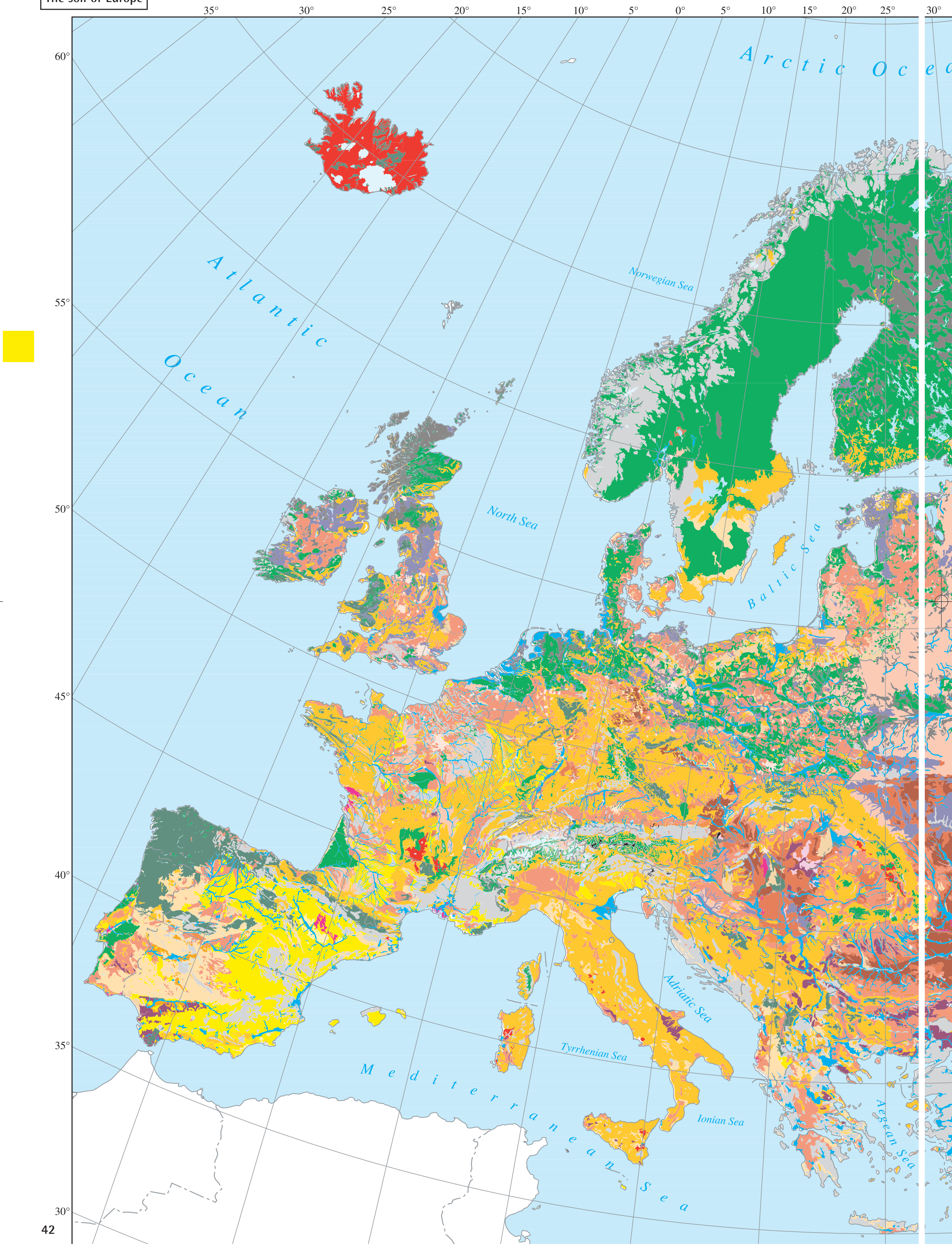


Plate 1

The soil of Europe



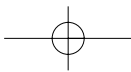
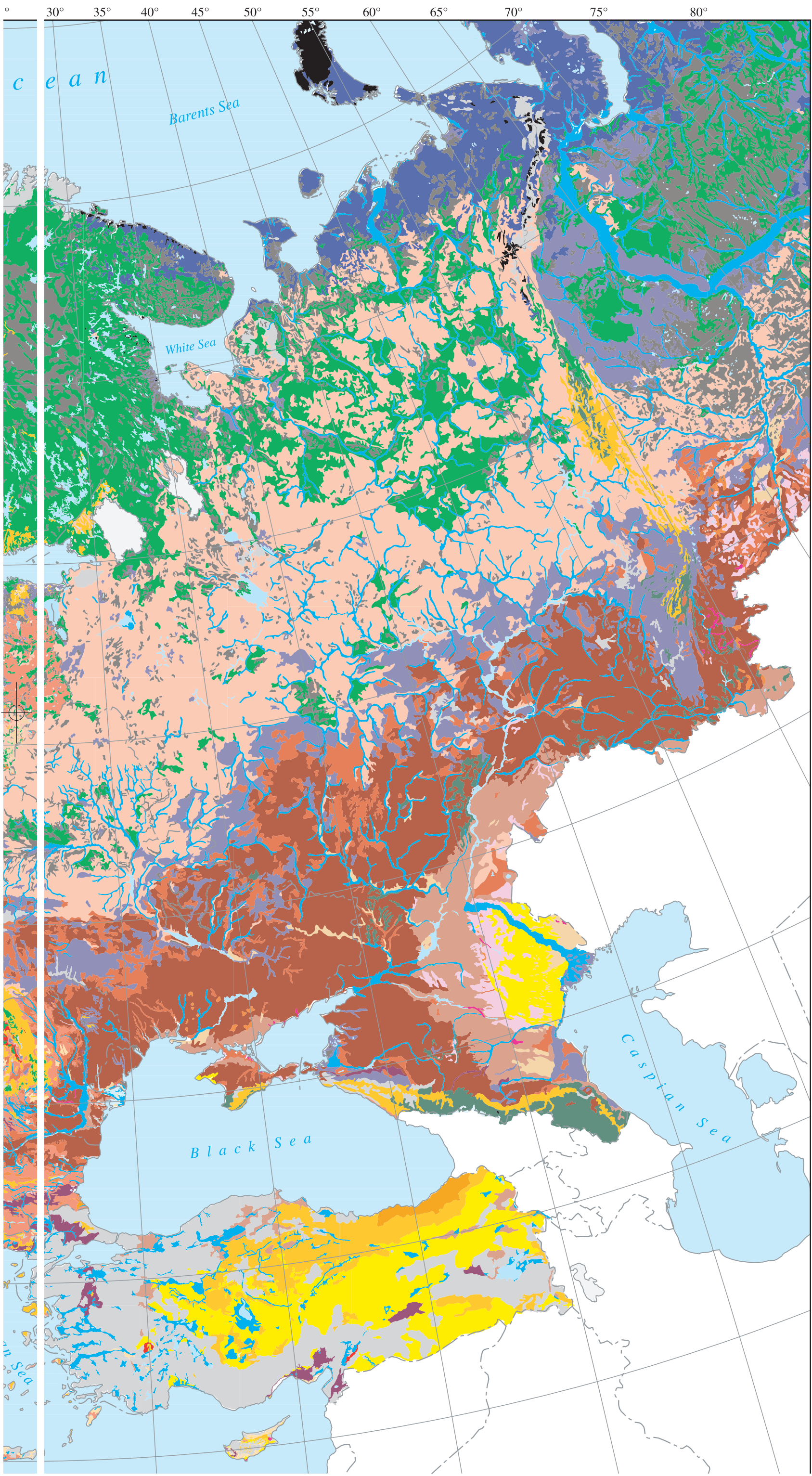


Plate 1



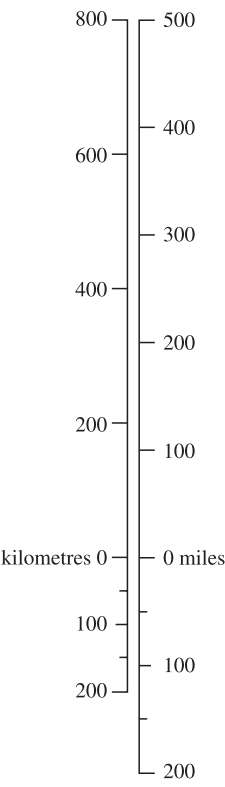
WRB Major Reference Group Legend

Acrisol	Luvisol
Albeluvisol	Phaeozem
Andosol	Planosol
Anthrosol	Podzol
Arenosol	Regosol
Calcisol	Solonchak
Cambisol	Solonetz
Chernozem	Umbrisol
Cryosol	Vertisol
Fluvisol	Rock
Gleysol	Urban
Gypsisol	Water body
Histosol	Marsh
Kastanozem	Soil disturbed by man
Leptosol	Glacier

Most of southern, western and northwestern Europe is exposed to the continental seas of the Atlantic Ocean while the Arctic Ocean bounds the continent on the north, Europe neighbours the vast Asian continent in the east, southeast and the south. The boundary between Europe and Asia passes through the Ural Mountains, the Ural River, part of the Caspian Sea, and the Caucasus Mountains in Georgia. The northernmost point of the European mainland is Cape Nordkinn (72°N) in Norway while the southernmost point Punta de Tarifa (36°N) is in Spain near Gibraltar. From west to east, Europe extends from the jagged coastline of County Kerry in the Irish Republic (11°W) to the eastern slopes of the Urals in Russia (60°E). The highest point of the continent is El'brus (5,642 m) in the Caucasus Mountains of southwestern Russia. The lowest point of Europe is located along the northern shore of the Caspian Sea at 28 m below sea level.

The distribution of the major soil groups is driven by the considerable extent of the continent that crosses Arctic, Boreal, Temporal and Subtropical bio-climatic zones and from west to east the reduced influence of Atlantic Ocean. The presence of vast flat areas (e.g. North European and Russian plains) together with a uniform cover of loose deposits support a latitudinal zonality for soil that ranges from the Cryosols in the tundra, Albeluvisols, Podzols and Histosols in boreal and temperate forests, Phaeozems, Chernozems and Kastanozems in the temperate steppe and Calcisols, Solnetz and Solonchaks in semi-desert of Mediterranean Basin. Soil cover of Western Europe shows a similar zonality, which is smoothed by the diversity of parent materials and the influence of oceanic climate. Mountains complicate the soil mosaic manifesting a change of soil type due altitude. Regosols situated above snow line in the high mountains are perennially frozen.

Scale 1: 11 250 000
Projection: Lambert Azimuthal



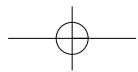
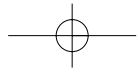
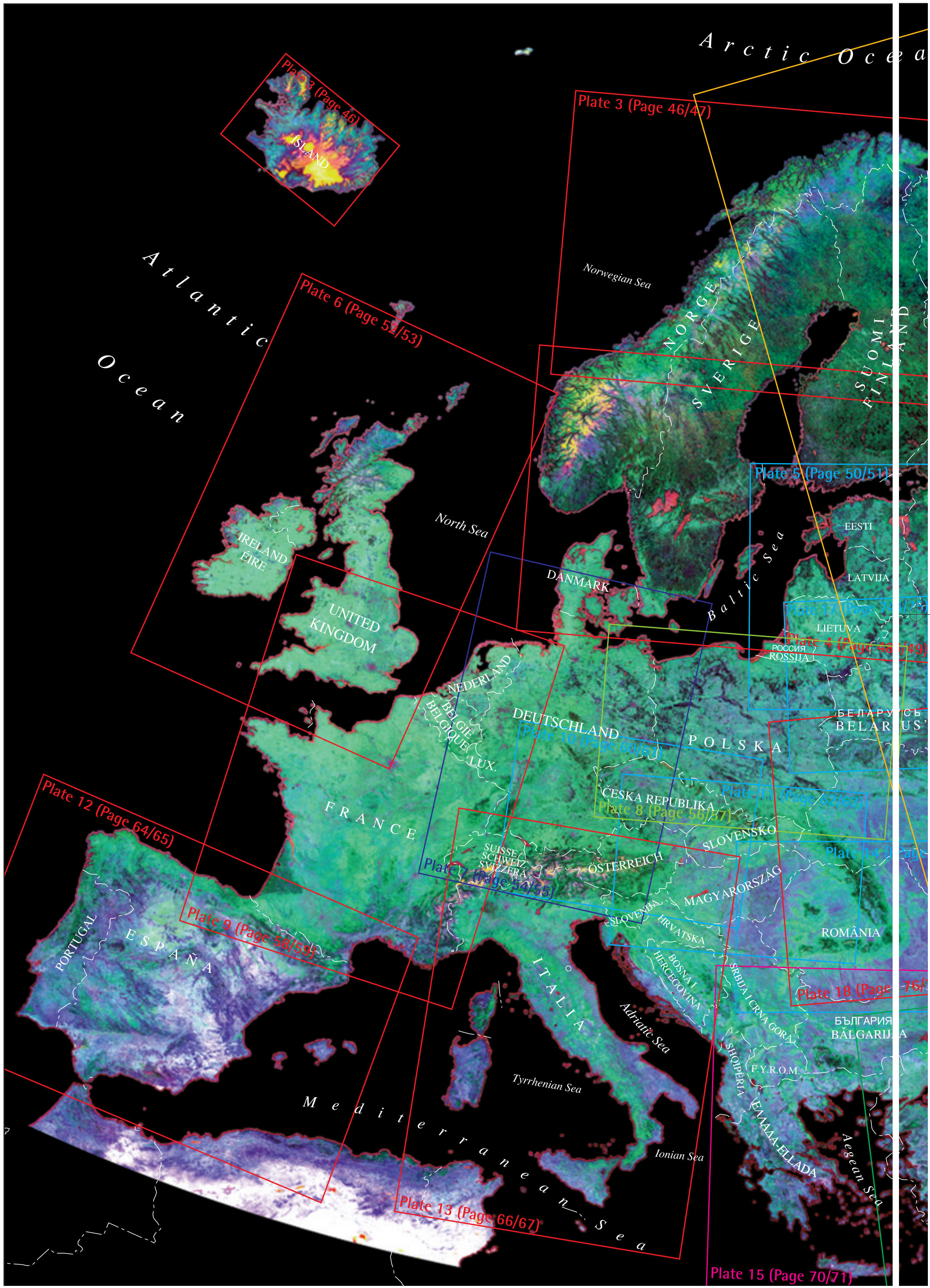


Plate 2

Index of regional maps



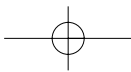
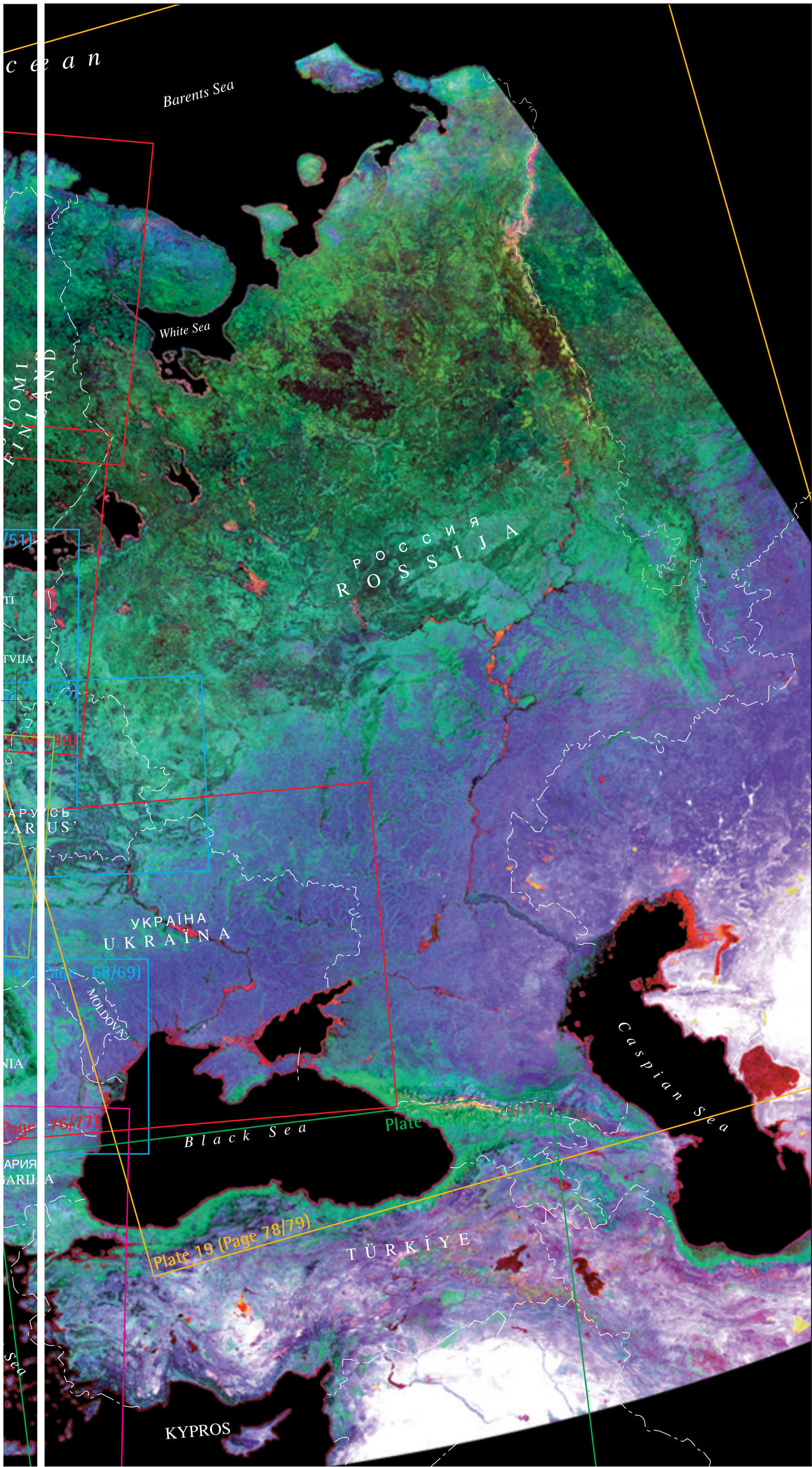
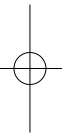


Plate 2



Key to map scales

- 1: 1 500 000
- 1: 1 750 000
- 1: 2 000 000
- 1: 2 200 000
- 1: 2 500 000
- 1: 3 000 000
- 1: 6 500 000



Scale 1: 11 250 000
Projection: Lambert Azimuthal

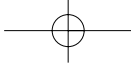
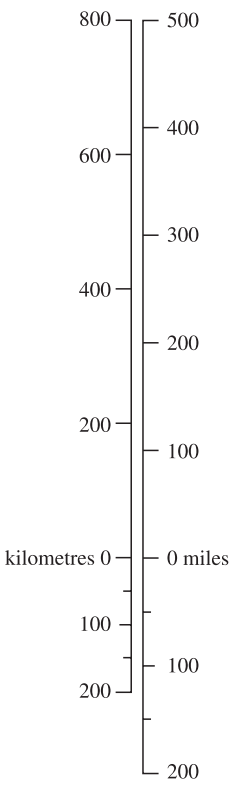


Plate 3

