Name	Top level clas	Description	Color	R	G	В
Haplic (undetermined) Acrisols	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. Other diagnostic horizons might occur but have not been recorded.	#FE813E	254	129	62
Haplic (undetermined) Acrisols (Alumic)	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. Having an Al saturation (effective) of 50 percent or more in some layer between 50 and 100 cm from the surface. Other diagnostic horizons might occur but have not been recorded.	#FD9F39	253	159	57
Haplic (undetermined) Acrisols (Ferric)	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. The ferric horizon (from Latin ferrum, iron) is one in which segregation of Fe, or Fe and manganese (Mn), has taken place to such an extent that large mottles or discrete nodules have formed and the intermottle/internodular matrix is largely depleted of Fe. Generally, such segregation leads to poor aggregation of the soil particles in Fedepleted zones and compaction of the horizon. Other diagnostic horizons might occur but have not been recorded.	#FDAE6B	253	174	107
Haplic (undetermined) Acrisols (Humic)	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. Having the following organic carbon contents in the fine earth fraction as a weighted average in Ferralsols and Nitisols, 1.4 percent or more to a depth of 100 cm from the mineral soil surface; in Leptosols, 2 percent or more to a depth of 25 cm from the mineral soil surface; in other soils, 1 percent or more to a depth of 50 cm from the mineral soil surface. Other diagnostic horizons might occur but have not been recorded.	#FD8D3C	253	141	60
Plinthic Acrisols	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. The plinthic horizon (from Gr. plinthos, brick) is a subsurface horizon which constitutes an iron-rich, humus-poor mixture of kaolinitic clay with quartz and other constituents, and which changes irreversibly to a hardpan or to irregular aggregates on exposure to repeated wetting and drying with free access of oxygen.	#EC6801	236	104	1
Vetic Acrisols	Acrisols	Acrisols = Strongly leached, red and yellow soils of wet (sub-)tropical regions on acid parent rock, with a clay accumulation horizon, low cation exchange capacity and low base saturation. Having an ECEC (sum of exchangable bases plus exchangeable acidity in 1 M KCl) of less than 6 cmol / kg clay in some subsurface layer within 100 cm of the soil surface.	#E66A03	230	106	3
Haplic (undetermined) Albeluvisols	Albeluvisols	Albeluvisols = Base-poor soils of humid temperate regions with a bleached eluviation horizon tonguing into a clay-enriched subsurface horizon. Other diagnostic horizons might occur but have not been recorded.	#F0C85C	240	200	92
Histic Albeluvisols	Albeluvisols	Albeluvisols = Base-poor soils of humid temperate regions with a bleached eluviation horizon tonguing into a clay-enriched subsurface horizon. The histic horizon (from Greek histos, tissue) is a surface horizon, or a subsurface horizon occurring at shallow depth, that consists of poorly aerated organic material.	#FFD372	255	211	114
Umbric Albeluvisols	Albeluvisols	Albeluvisols = Base-poor soils of humid temperate regions with a bleached eluviation horizon tonguing into a clay-enriched subsurface horizon. The umbric horizon (from Latin umbra, shade) is a thick, dark-coloured, base-depleted surface horizon rich in organic matter.	#FFD170	255	209	112
Cutanic Alisols	Alisols	Alisols = Soils of wet (sub-)tropical regions with high cation exchange capacity and much exchangeable aluminium. Having clay coatings in some parts of an argic horizon either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout.	#E4DBBF	228	219	191
Haplic (undetermined) Alisols	Alisols	Alisols = Soils of wet (sub-)tropical regions with high cation exchange capacity and much exchangeable aluminium. Other diagnostic horizons might occur but have not been recorded.	#F5EBCC	245	235	204
Aluandic Andosols	Andosols	Andosols = Soil developed from volcanic material, are young immature soils, characteristics depend on type of volcanic material. Having one or more layers, cumulatively 30 m or more thick, with andic properties.	#FC6B5D	252	107	93
Haplic (undetermined) Andosols	Andosols	Andosols = Soil developed from volcanic material, are young immature soils, characteristics depend on type of volcanic material. Other diagnostic horizons might occur but have not been recorded.	#F5E7CA	245	231	202
Vitric Andosols	Andosols	Andosols = Soil developed from volcanic material, are young immature soils, characteristics depend on type of volcanic material. Vitric properties (from Latin vitrum, glass) apply to layers with volcanic glass and other primary minerals derived from volcanic ejecta and which contain a limited amount of short-range-order minerals.	#FC5546	252	85	70
Albic Arenosols	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Having an albic horizon (a light-coloured subsurface horizon from which clay and free iron oxides have been removed) starting within 100 cm of the soil surface.	#FFE8BE	255	232	190

Ferralic Arenosols	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Having a ferralic horizon starting within 200 cm of the soil surface (in Anthrosols only), or ferralic properties in at least some layer starting within 100 cm of the soil surface (in other soils)	#FEE7C0	254	231	192
Haplic (undetermined) Arenosols	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Other diagnostic horizons might occur but have not been recorded.	#FEE3C0	254	227	192
Haplic (undetermined) Arenosols (Calcaric)	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Having calcaric material between 20 and 50 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, whichever is shallower. Other diagnostic horizons might occur but have not been recorded.	#FEE4B1	254	228	177
Hypoluvic Arenosols	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Having an absolute clay increase of 3 percent or more within 100 cm of the soil surface (in Arenosols only).	#FEEEC0	254	238	192
Protic Arenosols	Arenosols	Arenosols = Sandy soils of desert areas, beach ridges, inland dunes, areas with highly weathered sandstone, etc. showing little or no profile development. Showing no soil horizon development (in Arenosols only).	#FEF3C0	254	243	192
Haplic (undetermined) Calcisols	Calcisols	Calcisols = Soils of (semi-)arid regions with enrichment of secondary carbonates. Other diagnostic horizons might occur but have not been recorded.	#FFEF51	255	239	81
Haplic (undetermined) Calcisols (Sodic)	Calcisols	Calcisols = Soils of (semi-)arid regions with enrichment of secondary carbonates. Having 15 percent or more exchangeable Na plus Mg on the exchange complex within 50 cm of the soil surface throughout. Other diagnostic horizons might occur but have not been recorded.	#F8E729	248	231	41
Luvic Calcisols	Calcisols	Calcisols = Soils of (semi-)arid regions with enrichment of secondary carbonates. Having an argic horizon that has a CEC of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#FFFC2B	255	252	43
Petric Calcisols	Calcisols	Calcisols = Soils of (semi-)arid regions with enrichment of secondary carbonates. Having a strongly cemented or indurated layer starting within 100 cm of the soil surface.	#FFEE2B	255	238	43
Endogleyic Cambisols	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having between 50 and 100 cm of the mineral soil surface in some parts reducing conditions and in 25 percent or more of the soil volume a gleyic colour pattern.	#FDCE70	253	206	112
Ferralic Cambisols	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having a ferralic horizon starting within 200 cm of the soil surface (in Anthrosols only), or ferralic properties in at least some layer starting within 100 cm of the soil surface (in other soils)	#EDC669	237	198	105
Haplic (undetermined) Cambisols	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Other diagnostic horizons might occur but have not been recorded.	#FDE260	253	226	96
Haplic (undetermined) Cambisols (Calcaric)	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having calcaric material between 20 and 50 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, whichever is shallower. Other diagnostic horizons might occur but have not been recorded.	#FDE770	253	231	112
Haplic (undetermined) Cambisols (Chromic)	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having within 150 cm of the soil surface a subsurface layer, 30 cm or more thick, that has a Munsell hue redder than 7.5 YR or that has both, a hue of 7.5 YR and a chroma, moist, of more than 4. Other diagnostic horizons might occur but have not been recorded.	#FDF770	253	247	112

Haplic (undetermined) Cambisols (Sodic) Leptic Cambisols	Cambisols	Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having 15 percent or more exchangeable Na plus Mg on the exchange complex within 50 cm of the soil surface throughout. Other diagnostic horizons might occur but have not been recorded. Cambisols = Soils that show "signs of beginning soil formation", i.e. that are only moderately developed on account of their limited pedogenetic age or because of rejuvenation of the soil material. Moderately developed soils occur in all environments, from sea level to the highlands, from the equator to the boreal regions, and under all kinds of vegetation. Having continuous rock starting within 100 cm of the soil surface.	#FDE570	253 253	235	112
Vertic Cambisols	Cambisols		#FDDF70	253	223	112
Calcic Chernozems	Chernozems	Chernozems = Soils with deep, very dark surface soils and carbonate enrichment in the subsoil that occur in the steppe zone between the dry climates and the humid Temperate Zone. This transition zone has a climax vegetation of ephemeral grasses and dry forest. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#E5C75D	229	199	93
Haplic (undetermined) Chernozems	Chernozems	Chernozems = Soils with deep, very dark surface soils and carbonate enrichment in the subsoil that occur in the steppe zone between the dry climates and the humid Temperate Zone. This transition zone has a climax vegetation of ephemeral grasses and dry forest.	#E5D15C	229	209	92
Luvic Chernozems	Chernozems	Chernozems = Soils with deep, very dark surface soils and carbonate enrichment in the subsoil that occur in the steppe zone between the dry climates and the humid Temperate Zone. This transition zone has a climax vegetation of ephemeral grasses and dry forest. Having an argic horizon that has a CEC of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#E5D85C	229	216	92

Haplic (undetermined) Cryosols	Cryosols	Cryosols = Soils of permafrost regions. These soils show signs of 'cryoturbation' (i.e. disturbance by freeze-thaw sequences and ice segregation) such as irregular or broken soil horizons and organic matter in the subsurface soil, often concentrated along the top of the permafrost table. Other diagnostic horizons might occur but have not been recorded.	#927D9E	146	125	158
Turbic Cryosols	Cryosols	Cryosols = Soils of permafrost regions. These soils show signs of 'cryoturbation' (i.e. disturbance by freeze-thaw sequences and ice segregation) such as irregular or broken soil horizons and organic matter in the subsurface soil, often concentrated along the top of the permafrost table. Having cryoturbation features (mixed material, disrupted soil horizons, involutions, organic intrusions, frost heave, separation of coarse from fine materials, cracks or patterened ground) at the soil surface or above a cryic horizon and within 100 cm of the soil surface.	#7A7C88	122	124	136
Vitric Cryosols	Cryosols	Cryosols = Soils of permafrost regions. These soils show signs of 'cryoturbation' (i.e. disturbance by freeze-thaw sequences and ice segregation) such as irregular or broken soil horizons and organic matter in the subsurface soil, often concentrated along the top of the permafrost table. Vitric properties (from Latin vitrum, glass) apply to layers with volcanic glass and other primary minerals derived from volcanic ejecta and which contain a limited amount of short-range-order minerals.	#9E8C7D	158	140	125
Petric Durisols	Durisols	Durisols = Soils of (semi-)arid regions with a layer or nodules of soil material that is cemented by silica. Having a strongly cemented or indurated layer starting within 100 cm of the soil surface.	#FAEBC6	250	235	198
Acric Ferralsols	Ferralsols	Ferralsols = Soils of wet (sub-)tropical regions that have a very low cation exchange capacity and are virtually devoid of weatherable minerals. Having an argic horizon that has a CEC (by 1 M NH4OAc) of less than 24 cmolc kg-1 clay in some part to a maximum depth of 50 cm below its upper limit, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 50 and 100 cm from the soil surface.	#FC894D	252	137	77
Haplic (undetermined) Ferralsols	Ferralsols	Ferralsols = Soils of wet (sub-)tropical regions that have a very low cation exchange capacity and are virtually devoid of weatherable minerals. Other diagnostic horizons might occur but have not been recorded.	#FC9C4D	252	156	77
Haplic (undetermined) Ferralsols (Rhodic)	Ferralsols	Ferralsols = Soils of wet (sub-)tropical regions that have a very low cation exchange capacity and are virtually devoid of weatherable minerals. Having within 150 cm of the soil surface a subsurface layer, 30 cm or more thick, with a Munsell hue redder than 5 YR (3.5 YR or redder), a value, moist, of less than 3.5 and a value, dry, no more than one unit higher than the moist value. Other diagnostic horizons might occur but have not been recorded.	#E36940	227	105	64
Haplic (undetermined) Ferralsols (Xanthic)	Ferralsols	Ferralsols = Soils of wet (sub-)tropical regions that have a very low cation exchange capacity and are virtually devoid of weatherable minerals. Having a ferralic horizon that has in a subhorizon, 30 cm or more thick within 150 cm of the soil surface, a Munsell hue of 7.5 YR or yellower and a value, moist, of 4 or more and a chroma, moist, of 5 or more. Other diagnostic horizons might occur but have not been recorded.	#FC934D	252	147	77
Umbric Ferralsols	Ferralsols	Ferralsols = Soils of wet (sub-)tropical regions that have a very low cation exchange capacity and are virtually devoid of weatherable minerals. The umbric horizon (from Latin umbra, shade) is a thick, dark-coloured, base-depleted surface horizon rich in organic matter.	#F59641	245	150	65
Haplic (undetermined) Fluvisols	Fluvisols	Fluvisols = Young alluvial soils mainly found along rivers or other low terrain positions, which show stratification or other evidence of recent sedimentation. Other diagnostic horizons might occur but have not been recorded.	#10A9E9	16	169	233
Haplic (undetermined) Fluvisols (Arenic)	Fluvisols	Fluvisols = Young alluvial soils mainly found along rivers or other low terrain positions, which show stratification or other evidence of recent sedimentation. Having a texture of loamy fine sand or coarser in a layer, 30 cm or more thick, within 100 cm of the soil surface. Other diagnostic horizons might occur but have not been recorded.	#0FC9E9	15	201	233
Haplic (undetermined) Fluvisols (Calcaric)	Fluvisols	Fluvisols = Young alluvial soils mainly found along rivers or other low terrain positions, which show stratification or other evidence of recent sedimentation. Having calcaric material between 20 and 50 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, whichever is shallower. Other diagnostic horizons might occur but have not been recorded.	#0F8BE9	15	139	233
Haplic (undetermined) Fluvisols (Dystric)	Fluvisols	Fluvisols = Young alluvial soils mainly found along rivers or other low terrain positions, which show stratification or other evidence of recent sedimentation. Having a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#0F49E9	15	73	233
Haplic (undetermined) Fluvisols (Eutric)	Fluvisols	Fluvisols = Young alluvial soils mainly found along rivers or other low terrain positions, which show stratification or other evidence of recent sedimentation. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#0F8EE9	15	142	233

Calcic Gleysols	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#AB9ABF	171	154	191
Haplic (undetermined) Gleysols	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. Other diagnostic horizons might occur but have not been recorded.	#A087BF	160	135	191
Haplic (undetermined) Gleysols (Dystric)	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. Having a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#793FBF	121	63	191
Haplic (undetermined) Gleysols (Eutric)	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#9E83BF	158	131	191
Mollic Gleysols	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. The mollic horizon (from Latin mollis, soft) is a well-structured, dark-coloured surface horizon with a high base saturation and a moderate to high content of organic matter.	#8759BF	135	89	191
Umbric Gleysols	Gleysols	Gleysols = Non-stratified soils in waterlogged areas that do not receive regular additions of sediment. Usually found in low terrain positions. The umbric horizon (from Latin umbra, shade) is a thick, dark-coloured, base-depleted surface horizon rich in organic matter.	#936FBF	147	111	191
Calcic Gypsisols	Gypsisols	Gypsisols = Soils of (semi-)arid regions with a horizon of secondary gypsum enrichment. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#FFF9AD	255	249	173
Haplic (undetermined) Gypsisols	Gypsisols	Gypsisols = Soils of (semi-)arid regions with a horizon of secondary gypsum enrichment. Other diagnostic horizons might occur but have not been recorded.	#FFF587	255	245	135
Calcic Histosols	Histosols	Histosols = Soils consisting primarily of organic materials. They are defined as having 40 centimetres or more of organic soil material in the upper 80 centimetres. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#8291B8	130	145	184
Cryic Histosols	Histosols	Histosols = Soils consisting primarily of organic materials. They are defined as having 40 centimetres or more of organic soil material in the upper 80 centimetres. The cryic horizon (from Greek kryos, cold, ice) is a perennially frozen soil horizon in mineral or organic materials.	#8A9698	138	150	152
Fibric Histosols	Histosols	Histosols = Soils consisting primarily of organic materials. They are defined as having 40 centimetres or more of organic soil material in the upper 80 centimetres. Having, after rubbing, two-thirds or more (by volume) of the organic material consisting of recognizable plant tissue within 100 cm of the soil surface (in Histosols only).	#788092	120	128	146
Hemic Histosols	Histosols	Histosols = Soils consisting primarily of organic materials. They are defined as having 40 centimetres or more of organic soil material in the upper 80 centimetres. Having, after rubbing, between two-thirds and one-sixth (by volume) of the organic material consisting of recognizable plant tissue within 100 cm from the soil surface (in Histosols only).	#3C5A6A	60	90	106

Sapric Histosols	Histosols	Histosols = Soils consisting primarily of organic materials. They are defined as having 40 centimetres or more of organic soil material in the upper 80 centimetres. Having, after rubbing, less than one-sixth (by volume) of the organic material consisting of recognizable plant tissue within 100 cm of the soil surface (in Histosols only).	#7F807A	127	128	122
Calcic Kastanozems	Kastanozems	Kastanozems = Soils occurring in the driest parts of the steppe zone. Compared to Kastanozmes they are less deep, brownish surface soils and have carbonate and/or gypsum accumulation at some depth. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#D2A18D	210	161	141
Haplic (undetermined) Kastanozems	Kastanozems	Kastanozems = Soils occurring in the driest parts of the steppe zone. Compared to Kastanozmes they are less deep, brownish surface soils and have carbonate and/or gypsum accumulation at some depth. Other diagnostic horizons might occur but have not been recorded.	#D28769	210	135	105
Haplic (undetermined) Leptosols	Leptosols	Leptosols = Shallow soils in elevated and/or eroding areas over hard rock or highly calcareous material. Other diagnostic horizons might occur but have not been recorded.	#988F98	152	143	152
Haplic (undetermined) Leptosols (Eutric)	Leptosols	Leptosols = Shallow soils in elevated and/or eroding areas over hard rock or highly calcareous material. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#C9C9C9	201	201	201
Lithic Leptosols	Leptosols	Leptosols = Shallow soils in elevated and/or eroding areas over hard rock or highly calcareous material. Having continuous rock starting within 10 cm of the soil surface (in Leptosols only).	#B4BDB6	180	189	182
Mollic Leptosols	Leptosols	Leptosols = Shallow soils in elevated and/or eroding areas over hard rock or highly calcareous material. The mollic horizon (from Latin mollis, soft) is a well-structured, dark-coloured surface horizon with a high base saturation and a moderate to high content of organic matter.	#9098A3	144	152	163
Rendzic Leptosols	Leptosols	Leptosols = Shallow soils in elevated and/or eroding areas over hard rock or highly calcareous material. Having a mollic horizon that contains or immediately overlies calcaric materials containing 40 percent or more calcium carbonate equivalent.	#A2A2A2	162	162	162
Haplic (undetermined) Lixisols	Lixisols	Lixisols = Soils of wet (sub-)tropical regions with a low cation exchange capacity but high base saturation percentage. Other diagnostic horizons might occur but have not been recorded.	#F7C7CA	247	199	202
Haplic (undetermined) Lixisols (Chromic)	Lixisols	Lixisols = Soils of wet (sub-)tropical regions with a low cation exchange capacity but high base saturation percentage. Having within 150 cm of the soil surface a subsurface layer, 30 cm or more thick, that has a Munsell hue redder than 7.5 YR or that has both, a hue of 7.5 YR and a chroma, moist, of more than 4. Other diagnostic horizons might occur but have not been recorded.	#F7B5E9	247	181	233
Haplic (undetermined) Lixisols (Ferric)	Lixisols	Lixisols = Soils of wet (sub-)tropical regions with a low cation exchange capacity but high base saturation percentage. Having a ferric horizon (segregation of Fe, or Fe and Mn with large mottles or discrete nodules) starting from 100 cm of the soil surface. Other diagnostic horizons might occur but have not been recorded.	#F795B6	247	149	182
Albic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Having an albic horizon (a light-coloured subsurface horizon from which clay and free iron oxides have been removed) starting within 100 cm of the soil surface.	#F896B4	248	150	180
Calcic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#F9A890	249	168	144
Gleyic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Having within 100 cm of the mineral soil surface in some parts reducing conditions and in 25 percent or more of the soil volume a gleyic colour pattern.	#F9A091	249	160	145
Haplic (undetermined) Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Other diagnostic horizons might occur but have not been recorded.	#F99491	249	148	145

Haplic (undetermined) Luvisols (Chromic)	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Having within 150 cm of the soil surface a subsurface layer, 30 cm or more thick, that has a Munsell hue redder than 7.5 YR or that has both, a hue of 7.5 YR and a chroma, moist, of more than 4. Other diagnostic horizons might occur but have not been recorded.	#F9919B	249	145	155
Haplic (undetermined) Luvisols (Ferric)	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. The ferric horizon (from Latin ferrum, iron) is one in which segregation of Fe, or Fe and manganese (Mn), has taken place to such an extent that large mottles or discrete nodules have formed and the intermottle/internodular matrix is largely depleted of Fe. Generally, such segregation leads to poor aggregation of the soil particles in Fedepleted zones and compaction of the horizon. Other diagnostic horizons might occur but have not been recorded.	#F99C92	249	156	146
Leptic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Having continuous rock starting within 100 cm of the soil surface.	#F99184	249	145	132
Stagnic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. Having within 100 cm of the mineral soil surface in some parts reducing conditions for some time during the year and in 25 percent or more of the soil volume, single or in combination, a stagnic colour pattern or an albic horizon.	#F3B992	243	185	146
Vertic Luvisols	Luvisols	Luvisols = Brownish and greyish, base-rich soils of humid temperate regions with a distinct clay accumulation horizon. The vertic horizon (from Latin vertere, to turn) is a clayey subsurface horizon that, as a result of shrinking and swelling, has slickensides and wedge-shaped structural aggregates.	#F99192	249	145	146
Alic Nitisols	Nitisols	Nitisols = Deep soils of wet (sub-)tropical regions in relatively rich parent material and marked by shiny, nutty structure elements. Having an argic horizon that has a CEC (by 1 M NH4OAc) of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 50 and 100 cm from the soil surface.	#A05246	160	82	70
Haplic (undetermined) Nitisols (Rhodic)	Nitisols	Nitisols = Deep soils of wet (sub-)tropical regions in relatively rich parent material and marked by shiny, nutty structure elements. Having within 150 cm of the soil surface a subsurface layer, 30 cm or more thick, with a Munsell hue redder than 5 YR (3.5 YR or redder), a value, moist, of less than 3.5 and a value, dry, no more than one unit higher than the moist value. Other diagnostic horizons might occur but have not been recorded.	#CC7B68	204	123	104
Haplic (undetermined) Phaeozems	Phaeozems	Phaeozems = Dusky red soils of prairie regions with high base saturation but no visible signs of secondary carbonate accumulation. Other diagnostic horizons might occur but have not been recorded.	#D5EADB	213	234	219
Leptic Phaeozems	Phaeozems	Phaeozems = Dusky red soils of prairie regions with high base saturation but no visible signs of secondary carbonate accumulation. Having continuous rock starting within 100 cm of the soil surface.	#B4EADB	180	234	219
Luvic Phaeozems	Phaeozems	Phaeozems = Dusky red soils of prairie regions with high base saturation but no visible signs of secondary carbonate accumulation. Having an argic horizon that has a CEC of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#C2EADB	194	234	219
Endogleyic Planosols	Planosols	Planosols = Brownish and greyish soils of humid temperate regions with a bleached topsoil over dense, slowly permeable subsoil. Having between 50 and 100 cm of the mineral soil surface in some parts reducing conditions and in 25 percent or more of the soil volume a gleyic colour pattern.	#D7965F	215	150	95
Haplic (undetermined) Planosols (Dystric)	Planosols	Planosols = Brownish and greyish soils of humid temperate regions with a bleached topsoil over dense, slowly permeable subsoil. Having a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#F0966B	240	150	107
Haplic (undetermined) Planosols (Eutric)	Planosols	Planosols = Brownish and greyish soils of humid temperate regions with a bleached topsoil over dense, slowly permeable subsoil. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#F69C69	246	156	105

Luvic Planosols	Planosols	Planosols = Brownish and greyish soils of humid temperate regions with a bleached topsoil over dense, slowly permeable subsoil. Having an argic horizon that has a CEC of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#D29964	210	153	100
Solodic Planosols	Planosols	Planosols = Brownish and greyish soils of humid temperate regions with a bleached topsoil over dense, slowly permeable subsoil. Having a layer, 15 cm or more thick within 100 cm of the soil surface, with the columnar or prismatic structure of the natric horizon, but lacking its sodium saturation requirements.	#D8955D	216	149	93
Acric Plinthosols	Plinthosols	Plinthosols = Soils of wet (sub-)tropical regions on old weathering surfaces; these soils are marked by the presence of a mixture of clay and quartz ('plinthite') that hardens irreversibly upon exposure to the open air. Having an argic horizon that has a CEC (by 1 M NH4OAc) of less than 24 cmolc kg-1 clay in some part to a maximum depth of 50 cm below its upper limit, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 50 and 100 cm from the soil surface.	#845851	132	88	81
Lixic Plinthosols	Plinthosols	Plinthosols = Soils of wet (sub-)tropical regions on old weathering surfaces; these soils are marked by the presence of a mixture of clay and quartz ('plinthite') that hardens irreversibly upon exposure to the open air. Having an argic horizon that has a CEC (by 1 M NH4OAc) of 24 cmolc kg-1 clay or more in some part to a maximum depth of 50 cm below its upper limit, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#AB7269	171	114	105
Gleyic Podzols	Podzols	Podzols = Soils of humid temperate regions with a bleached eluviation horizon over an accumulation horizon of organic matter with aluminium and/or iron. Having within 100 cm of the mineral soil surface in some parts reducing conditions and in 25 percent or more of the soil volume a gleyic colour pattern.	#6EAA7C	110	170	124
Haplic (undetermined) Podzols	Podzols	Podzols = Soils of humid temperate regions with a bleached eluviation horizon over an accumulation horizon of organic matter with aluminium and/or iron. Other diagnostic horizons might occur but have not been recorded.	#6DAA61	109	170	97
Aric Regosols	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having only remnants of diagnostic horizons – disturbed by deep ploughing	#FDE4B7	253	228	183
Calcaric Regosols	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having calcaric material between 20 and 50 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, whichever is shallower.	#FDD2B8	253	210	184
Haplic (undetermined) Regosols (Dystric)	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having a base saturation (by 1 M NH4OAc) of less than 50 percent in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#FDD897	253	216	151
Haplic (undetermined) Regosols (Eutric)	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#FDDA9C	253	218	156
Haplic (undetermined) Regosols (Sodic)	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having 15 percent or more exchangeable Na plus Mg on the exchange complex within 50 cm of the soil surface throughout. Other diagnostic horizons might occur but have not been recorded.	#FFD49C	255	212	156
Leptic Regosols	Regosols	Regosols = Relatively deep soils that occur in unconsolidated materials and which have only surficial profile development, e.g. because of low soil temperatures, prolonged dryness or erosion. Having continuous rock starting within 100 cm of the soil surface.	#FDD58E	253	213	142

Gypsic Solonchaks	Solonchaks	Solonchaks = Soils of (semi-)arid regions with a high content of soluble salts. The gypsic horizon (from Greek gypsos) is a commonly non-cemented horizon containing secondary accumulations of gypsum (CaSO4.2H2O) in various forms. If the accumulation of gypsum becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of gypsum prevail, a hypergypsic qualifier is used.	#E05B9A	224	91	154
Haplic (undetermined) Solonchaks	Solonchaks	Solonchaks = Soils of (semi-)arid regions with a high content of soluble salts. Other diagnostic horizons might occur but have not been recorded.	#E05BB4	224	91	180
Haplic (undetermined) Solonchaks (Sodic)	Solonchaks	Solonchaks = Soils of (semi-)arid regions with a high content of soluble salts. Having 15 percent or more exchangeable Na plus Mg on the exchange complex within 50 cm of the soil surface throughout. Other diagnostic horizons might occur but have not been recorded.	#E05B7F	224	91	127
Calcic Solonetz	Solonetz	Solonetz = Soils of (semi-)arid regions with a high percentage of adsorbed sodium (Na+) ions. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#F8D8ED	248	216	237
Gleyic Solonetz	Solonetz	Solonetz = Soils of (semi-)arid regions with a high percentage of adsorbed sodium (Na+) ions. Having within 100 cm of the mineral soil surface in some parts reducing conditions and in 25 percent or more of the soil volume a gleyic colour pattern.	#E2CDCC	226	205	204
Haplic (undetermined) Solonetz	Solonetz	Solonetz = Soils of (semi-)arid regions with a high percentage of adsorbed sodium (Na+) ions. Other diagnostic horizons might occur but have not been recorded.	#F8AADE	248	170	222
Mollic Solonetz	Solonetz	Solonetz = Soils of (semi-)arid regions with a high percentage of adsorbed sodium (Na+) ions. The mollic horizon (from Latin mollis, soft) is a well-structured, dark-coloured surface horizon with a high base saturation and a moderate to high content of organic matter.	#F8DFE6	248	223	230
Luvic Stagnosols	Stagnosols	Stagnosols = Soils with strong mottling of the soil profile due to redox processes caused by stagnating surface water. Having an argic horizon that has a CEC of 24 cmolc kg-1 clay or more throughout or to a depth of 50 cm below its upper limit, whichever is shallower, either starting within 100 cm of the soil surface or within 200 cm of the soil surface if the argic horizon is overlain by loamy sand or coarser textures throughout, and a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 50 and 100 cm from the soil surface.	#73C3F4	115	195	244
Haplic (undetermined) Umbrisols	Umbrisols	Umbrisols = Soils of humid temperate regions with a thick, dark, acid surface horizon that is rich in organic matter. Other diagnostic horizons might occur but have not been recorded.	#8C7E79	140	126	121
Leptic Umbrisols	Umbrisols	Umbrisols = Soils of humid temperate regions with a thick, dark, acid surface horizon that is rich in organic matter. Having continuous rock starting within 100 cm of the soil surface.	#798C83	121	140	131
Calcic Vertisols	Vertisols	Vertisols = Swelling and shrinking heavy clayey soils of backswamps, river basins, lake bottoms, and other areas with a high content of expanding 2:1 lattice clays. The calcic horizon (from Latin calx, lime) is a horizon in which secondary calcium carbonate (CaCO3) has accumulated in a diffuse form (calcium carbonate present only in the form of fine particles of less than 1 mm, dispersed in the matrix) or as discontinuous concentrations (pseudomycelia, cutans, soft and hard nodules, or veins). The accumulation may be in the parent material or in subsurface horizons, but it can also occur in surface horizons. If the accumulation of soft carbonates becomes such that all or most of the pedological and/or lithological structures disappear and continuous concentrations of calcium carbonate prevail, a hypercalcic qualifier is used.	#A87188	168	113	136
Haplic (undetermined) Vertisols	Vertisols	Vertisols = Swelling and shrinking heavy clayey soils of backswamps, river basins, lake bottoms, and other areas with a high content of expanding 2:1 lattice clays. Other diagnostic horizons might occur but have not been recorded.	#A88E99	168	142	153
Haplic (undetermined) Vertisols (Eutric)	Vertisols	Vertisols = Swelling and shrinking heavy clayey soils of backswamps, river basins, lake bottoms, and other areas with a high content of expanding 2:1 lattice clays. Having a base saturation (by 1 M NH4OAc) of 50 percent or more in the major part between 20 and 100 cm from the soil surface or between 20 cm and continuous rock or a cemented or indurated layer, or, in Leptosols, in a layer, 5 cm or more thick, directly above continuous rock. Other diagnostic horizons might occur but have not been recorded.	#A85C7D	168	92	125
Mollic Vertisols	Vertisols	Vertisols = Swelling and shrinking heavy clayey soils of backswamps, river basins, lake bottoms, and other areas with a high content of expanding 2:1 lattice clays. The mollic horizon (from Latin mollis, soft) is a well-structured, dark-coloured surface horizon with a high base saturation and a moderate to high content of organic matter.	#A851A2	168	81	162