THE ŁÓDŹ ATLAS

Sheet I: Łódź's location within the natural structures of Poland and the region

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Map A. Łódź's location within the physiogeographic systems of Poland

The physiogeographic division of Poland by Kondracki ranks regional units within the framework of the universal classification of the International Federation for Information and Documentation (FID). After much discussion, finally accepted was the division whose most recent version is included in the Atlas of the Republic of Poland (Atlas Rzeczypospolitej Polskiej 1995) and in the study by K o n d r a c k i (1998). Regional units of varying importance are shown on map A: territories, megaregions, provinces, sub-provinces (tab. 1), and macro-regions, as in the case of Łódzkie Region (Województwo Łódzkie).

Table 1. Physiogeographic division of Poland (K o n d r a c k i, 1998 – simplified)

Territory	Mega-region	Province	Sub-province
Western Europe	North of alpine Central Europe (3)	Central-European lowlands (31	Southern Baltic coasts (313) Southern Baltic lakes (314 and 315) Sasko-Łużyckie lowlands (317) **Central Polish lowlands (318)**
		Czech massif (33	Sudety with Przedgórze Sudeckie (332)
		Polish uplands (34	**Silesian-Kraków uplands (341)** **Małopolska uplands (342)** Lublin-Lvov uplands (343)
	Carpathians, Sub-carpathians and the Pannonian plain	Western Carpathians with Sub-carpathians (51)	Northern Sub-carpathians (512) Outer Western Carpathians (513) Central Western Carpathians (514)
		Eastern Carpathians (52)	Eastern Sub-carpathians (521) Eastern Beskids (522)
Europa Wschodnia	Eastern European lowlands (8)		Eastern Baltic coast (841) Eastern Baltic lakes (842) Podlasie-Belarus uplands (843) Polesie (845)
		East Baltic Belarusian lowlands (84)	
			Wołyńsko-Podolska uplands
		Ukrainian uplands (85)	

N.B. Names of the sub-provinces in which Łódzkie Region is located are presented in bold

Łódzkie Region belongs to the following sub-provinces: the Central Polish lowlands (318), the Silesian – Kraków uplands (341), and the Małopolska uplands (342). Łódź is located on the border zone between three macroregions of the Central Polish lowlands: the southern Wielkopolska lowlands (318.1/2), the southern Mazovian uplands (318.8), and the central Mazovian lowlands (318.7). Areas peripheral to Łódzkie Region (the southern part) belong to the Woźnicko-Wieluńska uplands (341.2) and the Przedborska upland (342.1).

While identifying the physiogeographic taxonomic units considered were the characteristics of the natural landscape, understood as a natural compound characterised by a defined specific structure of mutually interdependent environmental elements. Three classes of natural landscapes have been distinguished: lowland, upland, and mountainous (map A).

The landscape in Łódzkie Region is rather homogenous and dominated by lowlands (plains with periglacial deposits), varied by the valleys of the rivers Warta, Pilica, Bzura and Ner, as well as some fragments of terrace landscape with dunes. In line with the modified classification of natural landscapes in Poland (Kondracki, 1991), the type of natural glacial and fluvioglacial landscape described as 'hilly' has been distinguished in the zone to the N, N-E and S of Łódź.

The physiogeography of Poland, as reflected, e.g. by the types of natural landscapes, is 'enhanced' by vast nodal areas with best preserved nature and representative of different regions of the country. These areas (nodes of international and national significance – map A) are interconnected by ecological corridors that ensure continuity of the natural bonds within the system which has assumed the name of the national ecological network ECONET – POLAND. It is part of the incipient Pan-European Ecological Network ECONET (European ECOlogical NETwork).

Poland's natural structures being part of the ECONET network were evaluated based on such criteria as: biological diversity, naturalness, prevalence (of species and habitats), as well as their risk levels. The largest concentrations of nodal areas are found in Northern and Southern Poland. The central part is poorer in this respect (see map F), although in the area of Łódzkie Region, for instance, the national ecological system is supported by legal protection of areas with particular environmental significance.

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Map B: Łódź's location within geological structures of Poland and the Region

One of the most characteristic traits of Poland's geological structure is its high diversity resulting from its location on the interface of major European tectonic structures. Poland is the exclusive meeting place of major structural and tectonic units, i.e.:

- Precambrian platform in the north east of Poland;
- Palaeozoic (Caledonian and Hercynian) orogeny areas, partly covered by Mesozoic and Cenozoic sediments (mainly western and central parts of the country)
- the youngest Alpine orogeny systems represented by the ridges found in southern Europe (in Poland – the southern part of the country).

Only a few dozen kilometres north of Łódź runs one of the continent's most important geological boundaries separating the Precambrian platform of Eastern Europe from the Palaeozoic structures of Western Europe (map B). Central Poland, of which Łódzkie Region is an essential part, is dominated by Mesozoic units built from sedimentary rocks whose thickness frequently reaches 10 km. The largest is the Mogileńsko-Łódzka basin that formed during the early Kimmeridgian, and was finally shaped at the end of the Cretaceous (Laramian orogeny). Simultaneously, the Central Polish ridge was uplifted to the NE of Łódź and further in that direction a rim basin was formed (map B – XII, XIII, XIV). The Łódź basin is mainly built of Cretaceous limestone, sand, marl and gaizes which 'bend' in line with the underlying Jurassic sediments. Such an arrangement of sedimentary rocks with variable permeability implies the occurrence of several water-bearing strata, important from the perspective of the economic and urban needs of Łódź. In the south-west part of the Łódź basin there is the Central Polish ridge (map B – XIII) where the Upper Jurassic series rise from under the Cretaceous sediments in the zone between Tomaszów Mazowiecki and Łęczyca. This ridge in the southern part of Łódzkie Region consists of two parallel anticlines: the westerly one known as Sulejowska, and the easterly Gielniowska, separated by a shallow syncline in the vicinity of Tomaszów Mazowiecki filled with Cretaceous sediments.

It is in this zone, between Tomaszów and Sulejów, that valuable mineral resources of Jurassic limestone, sands, and Cretaceous sandstone are found (tab. 1). In the northern and north-western part of the Central Polish ridge (in the vicinity of Ozorków and Łęczyca) there developed large diapirs of Upper Permian salt that is extracted outside Łódzkie Region (Kłodawa region). Loamy, shelly, and sandy siderites (an iron ore), found in thin mid-Jurassic strata, were also extracted in the vicinity of Łęczyca. Jurassic rocks are visible on the surface along the south-eastern border of the Łódź basin, representing another tectonic unit – the Przedsudecka and Śląsko-Krakowska monocline (map B – XI). Infrequent limestone hills (near Radomsko and Działoszyn) separate the Łódź basin from that of Miechów. The Mesozoic structures underwent planation in the Tertiary (especially the area of the Central Polish ridge), which led to an inversion of the relief because during the Miocene (early Tertiary) a part of the Łódź basin became a peninsula elevated above the surrounding reservoirs. The sediments from that period do not produce compact series, and the most important – from the economic perspective – are the lignite deposits that fill the tectonic rift valley in the Mesozoic layer in the vicinity of Bełchatów.

The whole Łódzkie Region, including the immediate environs of Łódź itself, is covered by relatively consolidated deposits of Quaternary sediments, although their thickness varies (from less than 1 m to more than 150 m) with sand, fluvioglacial gravels, moraine clays, and mud-marl sediments of different origins (mostly fluvial and fluvioglacial). They were accumulated mostly in the Pleistocene, and during the southern Polish glaciations (Nida, San 1 and San 2), and especially the central Polish glaciations (Odra, and most of all the Warta) and were of the greatest importance for the formation of glacial and fluvioglacial deposits – map B. The rocks found in Łódzkie Region are frequently used as mineral resources. The most important ones are presented in table 1, and those that are particularly worth mentioning are Poland's largest lignite deposits in Bełchatów, as well as moulding sands deposits (in 2000, extraction of the deposits in Grudzień-Las, close to Tomaszów Mazowiecki, accounted for a half of the total national output), and the glass sands in the area of Biała Góra (resources in Łódzkie Region constitute 83% of the overall national resources and a half the national production output).

Table 1. Balance and industrial resources and their extraction in Łódzkie Region (as on 31.12.2000)

Resources	Number of sites	Natural resources [in thousand tonnes]	Industrial resources [in thousand tonnes]	Extraction in 2000 [in thousand tonnes]
Energy				
lignite	7	2 456 073	1 088 273	34 764.0
natural gas*	1	170	–	–
Chemical				
Halite	2	10 739 000	–	–
Mineral				
Brick clay	1	4 646	4 424	40.5
Road and building stone	25	87 990	15 131	298.0
Natural aggregates	333	393 503	98 898	3 952.0
Moulding sands	12	163 466	26 303	822.0
Quartz sands	16	41 706	1 533	75.0
Glass sands	9	488 912	170 693	764.0
Til	139	151 745	14 662	122.0
Peat	8	214	114	25.0
Limestone and marl	23	1 730 853	183 822	2 408.0

* - in million m³

S o u r c e : Bilans zasobów kopalin i wód podziemnych w Polsce. (Balance of extractable mineral resources and underground waters in Poland), collected work edited by S. Przeniosło, Ministry of the Environment, PIG, Warsaw, 2001

Map C: The climatic location of Łódź

Poland is situated within the transitional and moderately warm climatic zone. This transitional climate is produced by a mixture of continental influences (from the east) and Atlantic influences (from the west). This causes longitudinal climatic diversity. Simultaneously, influences from the much warmer temperate zone climates (southerly) and influences of the cooler temperate zone climates (northerly) clash on the Polish territory, which causes Poland's latitudinal climatic diversity. The overall effect of these geographically diverse influences is the grid pattern of Poland's spatial climatic diversity. This climatic division is reinforced by the latitudinal configuration of land relief in Poland, as well as the influence from the North Atlantic Drift and Poland's location in the western circulation zone (reinforcing the longitudinal effect). The Baltic Sea and the mountain and upland areas generate important modifications, but also reinforce the latitudinal pattern.

On designing the map illustrating Poland's location against the climatic diversity background, considered were the genetic factors of Poland's climatic divisions. This aspect has been shown by marking the effective ranges of the continental, Baltic and mountain influences. Separately marked have been the borders of relatively strongest and weakest influences. The hatching marks the areas where local modifications are caused by the upland influences (S o k o ł o w i c z 1973–1978). In order to highlight Poland's transitional position in the ocean-continental system, presented has been the distribution of average annual air temperature amplitudes (N i e d ź w i e d ź , U s t r n u l, 1993–1997). One consequence of the genetic circumstances of Poland's characteristic climatic divisions are the spatial distributions of meteorological parameters. Most frequently the isopleths are either longitudinal or latitudinal, but sometimes they also run in the NW-SE direction (especially in the transitional seasons of the year). These consequences are illustrated by the spatial pattern of the length (in days) of the thermal summer (daily temperature higher than 15°C) and thermal winter (daily temperature lower than 0° C) (L i m a n ó w k a , N i e d ź w i e d ź 1993–1997).

Łódź is located in proximity to the geographic centre of Poland, and consequently, in the intermediate zone between the influences of genetically different climatic factors. The dominance of each of these factors is relatively strong in Poland's border zones and weakens towards the centre. Consequently, the meteorological parameters for Łódź, both in annual, seasonal, and monthly breakdown, approximate the relevant mean values for the entire country. Also, the meteorological phenomena characteristic of the other parts of Poland (e.g. the coast and the mountains) do not occur in Łódź, and at the same time less frequently or less enhanced are the phenomena related to the continental and oceanic influences (Atlas..., 1973, 1994, 2000, Woś, 1999).

Literature

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Map D: Łódź's location within the hydrological and hydro-geological systems of Poland

Poland is situated in Central Europe, almost entirely within the Baltic Sea drainage basin. The territory of Poland occupies 322 577 km², of which 311 904 km² is land area (including inland waters). The Baltic Sea drainage basin covers 99.7% of this area, with the overall 0.3% lying in the drainage basins of the Northern Sea and the Black Sea.

Poland's incorporation in the afore-listed drainage basins is shown on the map (watersheds: European and drainage basins). The territory of Poland is drained by two large river systems, the Oder and the Vistula and the rivers in the Przymorze (Pomeranian) area. The Vistula river basin covers 54% of the country's area, and that of the River Oder – 33.9%. They are divided by the first-tier watershed which runs across the central part of Łódzkie Region and the southern parts of Łódź.

The Łódź Heights constitute a water node where there come together the watershed lines of the region's major rivers. This is where there spring up the rivers that flow radially towards the Bzura, Warta, and Pilica Rivers. The river systems are provided with water directly from rainfall, melting snow, and groundwater courses. This the river systems to diversify. The prevalent part of Łódzkie Region, including Łódź, belongs to a semi-developed nival system (tab. 1, map D).

Table 1. Types of river system in Poland (D y n o w s k a, 1991)

No	River system type	Runoff characteristics
1.	Weakly-developed nival	Average spring runoff does not exceed 130% of the annual average
2.	Well-developed nival	Average spring runoff (March and April) exceeds 180% of the annual average
3.	Semi-developed nival	Average spring runoff amounts to 130–180 % of the annual average
4.	Nival-pluvial	Average spring runoff usually amounts to 130–180% of the annual average; an increase in summer runoff is clearly noticeable (June, July and August), and amounts to 100 % of the annual average.
5.	Pluvial-nival	Average summer runoff is higher than or equal to the average spring runoff; in both cases amounting to 130–180 % of the annual average

In view of the diverse geological structure and lithology in Łódzkie Region, the water circulation type found here has been classified as diversified (D y n o w s k a 1991) – map D. In some areas of Poland, including the area of Bełchatów, water circulation is disturbed by open-cast lignite mining. Anthropopressure affects both the surface and underground waters.

The extractable underground water resources in Poland are generally stable and amount to 14–16 km³ per year, with the average of 15.7 km³ in the period 1995–2000. A significant part of these resources (65%) comes from the Quaternary aquifers. The national economy is primarily interested in fresh waters, whose mineralization does not exceed 1 g.dm^{-3}. The main extractable water-bearing levels' distribution in Poland, as presented on map D, is indicative of an unusual diversity of their hydro-geological structures. Łódzkie Region covers several hydrological regions, the largest of which are the Łódź Basin and Kujawsko-Mazowiecki region. The south-western part belongs to Krakowsko-Śląski or Kaliski regions, the southern part is included in the Miechów Basin, and the south-eastern part belongs to Świętokrzyski region; the eastern and the north-eastern areas are included in Południowo-Mazowieckie (South-Mazovian) region. The most important extractable fresh water aquifers in Łódzkie Region mainly originate from the Quaternary, Cretaceous and Jurassic formations, less so from the Tertiary formations (Burchard & Nalewajko 2000). The quality of underground water in the area is described either as 'medium' or 'good' (especially in the Cretaceous Łódź Basin). Łódź uses the underground resources of the Łódź Basin, mainly from the Upper Cretaceous (calcareous formations) and the Lower Cretaceous (sands, sandstones), as well as water from the Quaternary level.

Łódzkie Region deserves special attention in view of its significant, on the national scale, geothermal energy resources. In the area of Łódzkie Region, there are found parts of three geothermal regions: Szczecińsko-Łódzki region (central and NW part of Łódzkie Region), Grudziądzko-Warszawski region (NE part) and Przedsudecko-Północno-Świętokrzyski region (S and SW part of Łódzkie Region). Geothermal waters found in these regions may be of great economic importance since, for example, in the first two regions the thermal energy which can be obtained per km² equals 168 000–246 000 tonnes of conventional fuel. This fact places these regions, including Łódź, in line with the most important geothermal regions in Poland in terms of renewable energy potential which might to a great degree substitute the energy obtained through fuel combustion (B u r c h a r d & N a l e w a j k o , 2000, S o k o ł o w s k i 1999)

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Map E: Łódź's location within floral and faunal habitats in Poland

Łódź's location within floral habitats

The area of the Łódź Heights is crossed by the habitat boundaries of several species of vascular plants representing the so-called directional element of the domestic flora. Within this group, prevalent are the species that reach here their north-eastern habitat boundary and belong mainly to the so-called mountain species with altitudinal habitat distribution. From the geobotanical perspective, the prevalence of these species in the flora of the Łódź Heights indicates the upland nature of this area and likewise origin and relationship of its flora with the typically mountainous floral species of the Tatra and the Sudety mountains. The mountainous species that reach their northern and north-eastern boundaries in Łódzkie Region include:

- Silver fir *Abies alba* MILL. – a mountain species, and mistletoe *Viscum album* L. *Ssp abietis* (WIESB.) ABROM., a semi-parasite that grows on it. The habitat boundary of this mistletoe subspecies indicates, and probably specifies, the course of the natural habitat boundary of silver fir which, however, has been – frequently successfully – introduced in Polish forests beyond the boundary of its natural habitat (cf map 1);
- Norway spruce *Picea abies* (L.) H. KRAST. – with the north-eastern boundary of its southern, Alpine-mountainous habitat (cf map 2)
- chervil *Anthriscus nitida* (WAHJENB) HAZSL. – an umbelliferous species from the Tatra mountains (cf map 5)
- oat grass *Avenula planiculmis* (SCGRAD.) W. SAUER & CHMIELITSCHEK s.l. – a sub-alpine grass (cf map 6)
- bedstraw *Galium rotundifolium* L. – of the *Rubiaceae* family, a sub-alpine forest species;
- Wood ragwort *Senecio fuchsii* C. C. GMEL – of the *Compositae* family, a sub-alpine forest species;
- ragwort *Senecio rivularis* (WALDST. & KIT.) DC. – of the *Compositae* family, a mountainous species
- Wood Speedwell *Veronica montana* L. – of the *Scrophulariaceae* family, a sub-alpine forest species at its north-eastern boundary;
- Smooth lady's mantle *Alchemilla glabra* NEYGENF. – of the *Rosaecae* family, a mountainous species at its north-eastern boundary

Species representing the directional element with various defined habitat range boundaries

- Beech *Fagus sylvatica L.* – a forest forming tree, locally at its north-eastern boundary (cf map 3);
- red fescue *Festuca heterophylla* LAM. – a grass species at its north-eastern boundary;
- Black broom *Lembotropis nigricans* (L.) GRISEB. – a shrub from the *Papilonaceae* family at its northern, and locally north-western, boundary (cf map 7);
- broom *Chamaecytisus ruthenicus* (FISCH. Ex WOŁ) KLÁSK. – a shrub of the *Papilonaceae* family at its north-western boundary (cf map 8)
- broom *Chamaecytisus ratisbonensis* (SCAEFF.) ROTHM. – a shrub of the Papilonaceae family at its north-western boundary;
- spindle tree *Euonymus verrucousus* SCOP. – a shrub of the Celastraceae family at its western boundary (cf map 4);
- *Bugbane Cimicifuga europaea* SCHIPCZ. – a flowering plant, legally protected, of the Ranunculaceae family, at its north-western boundary.

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Łódź's location within faunal habitats

Łódź's location at the meeting point of two massive physiogeographic areas – the Belt of Lowland and Central-Polish Uplands causes that the area of the city and its environs is the penetration zone of different directional faunal elements. Prevalent are the species that reach their habitat boundaries in either the N-S direction, much less so those that spread in the E-W direction. One example of a mountainous species is the blue beetle *Carabus linnaei* whose compact habitat is limited to the Sudetens and the Carpathians, but whose distant habitats have been recorded in Łódź and its vicinity (cf map 9). What is more, in Łódź there are several species of the boreal-mountain group, for instance: the centipede *Monotarsobius curtipes*, bumblebee *Bombus jonellus*, snail Nesovitrea petronella, as well as mountain species such as *Trachyspera cata*, weevil *Otiorhynchus scaber*, and fly *Rhingia rostrata* (M a r k o w s k i etc. 1998). These species indicate the upland nature of this area and its relationship with the Carpathian fauna.

Atlantic species, which reach their western habitat boundary in this area, include woodlouse *Oniscus asellus*, clothes moth *Tinea palascentella*, tawny mining bee *Andrena armata* with the Vistula being the terminal ultimate habitat boundary. Taiga elements are relatively few, but include for instance the bumblebee *Bombus semenoviellus*, fly *Xylota coeruleiventris*, and the hoverfly *Melangyna barbifrons*. Sub-Mediterranean or sub-Pontean species are mainly connected with warm and dry ruderal habitats and here they reach their northernmost habitat boundaries. The first group includes the centipede *Monotarsobius dubosqui*, and the ants *Componotus fallax* and *Dolichoderus quadripuncatatus*. The sub-Pontean species are the long-horned beetle *Phytoecia virgula*, thistlehead weevil *Rhinocyllus conikus*, ladybird *Platynaspis luteorubra*, robber fly *Dasypogon diadema*, hoverfly *Heringia senilis*, and the velvet ant *Paramyrmosa brunnipes* (M a r k o w s k i et al 1998).

Out of the *Cyclostomata* family, one interesting species is the brook lamprey *Eudontomyzon mariae*, a ponteo-caspian species which here reaches its north-western habitat boundary (cf map 10) (W i t k o w s k i 2001). One example of a species living at its southernmost habitat boundary is the nine-spined stickleback *Pungitius pungitius*.

A relatively large number of bird species reach their habitat boundaries in this area. The grey-headed woodpecker *Picus canus* is an example of the taiga element linked to large forest complexes. Its habitats in Łagiewniki Las and in Spała are its terminal habitat boundary (cf map 11). The habitat boundaries of the nightingale (*Luscinia megarhynchos*) and thrush nightingale L. *luscinia* (cf map 12) (T o m i a ł o j ć 1990) are changing. The thrush nightingale is expanding its habitat in the south-westerly direction and so it is displacing the nightingale from river valleys and damp habitats. It is worth mentioning that only the nightingale inhabited Polish territory until the mid-60s, but presently both species exist, although the thrush nightingale outnumbers its relative (M a r k o w s k i etc. 1998). The expanding species also include the stonechat *Saxicola torquata* and the collared flycatcher *Ficedula albicollis*, both of which have in recent years colonised central Poland. The populations in the vicinity of Łódź and Warsaw are their terminal habitat boundaries. Map 13 presents the latter species.

Along the border with the Jura Krakowsko-Wieluńska runs a section of the north-western habitat boundary of an insectivorous mammal – the lesser shrew *Crocidura suaveolens* (cf map 14). The habitat boundary of the dormouse Muscardinus avellanarius has an interesting course as it runs through the northern regions of Mazury, through Podlesie and Mazowsze (Kampinoski National Park), through the vicinity of Łódź to the western border of Podgórze Sudeckie (cf map 15). The northernmost habitat boundaries are found here for two other species: the hamster *Cricetus cricetus* and pygmy field mouse *Apodemus microps* (cf map 16) (P u c e k , R a c z y ń s k i 1983).

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Map F: Łódź's location within environmentally active areas

The more important concept proposals serving the idea of environmental protection and engineering in Poland include: the national ecological network system ECONET – POLAND and its implementation strategy (Liro, 1995, 1998). The objective of this concept proposal is to preserve the environmental continuum by delimiting ecological corridors to interconnect particular protected areas with the highest environmental values. The ecological corridors allow the spread of species between nodal and neighbouring areas. The nodal areas are the units above the ecosystem, characterised by abundant ecosystems that are semi-natural or close to natural in character, as well as anthropogenic ecosystems that are extensively exploited, rich in plant and animal species characteristic of traditional agrocenoses (B u r c h a r d , N a l e w a j k o, 2000, L i r o, 1995).

The nodal areas of international and national significance are presented on maps A and F.

The ecological system of Łódzkie Region, as an element of the national system, in its primary outline is based on the valleys of the rivers Warta, Pilica, Bzura, Prosna, and Rawka (ecological corridors of national significance) joining ecologically higher-rated areas. These include parts of the nodal areas of international significance: 19 M 'central valley of the River Warta' (NW of Łódzkie Region) and 21M 'Puszcza Pilicka' (E part). In Łódzkie Region, there are also nodal areas of national significance which include 11 K 'Puszcza Bolimowska', 15 K 'Wieluński Upland', and 18 K 'Przedborski Area'.

Within and without these areas in Łódzkie Region there are many places of particular significance which are now legally protected (tab. 1, map F). The emerging and quite clear system of high environmental activity in Łódzkie Region references to the project postulated by O l a c z e k (1977) to protect the ecological system of central Poland. The longitudinal and latitudinal pattern of its essential elements produces a scaffold configuration with numerous branch-offs to the nodal areas of international significance located outside Łódzkie Region borders.

Table 1. Legally protected areas in Łódzkie Region in 2000

Method of protection	Number	Area	
		ha	% of Łódzkie Region's total area
National parks (part of Kampinoski National Park)	1	68.2	0.00
Nature reserves	88	7 174.6	0.39
Landscape parks	7	97 945.2	5.38
Protected landscape areas	15	187 392.0	10.29
Ecological sites	388	894.7	0.05
Documented habitats	2	10.5	0.00
Nature & landscape reserves	20	9 197.7	0.50
Natural monuments	4 146	x	x

S o u r c e: Environmental Protection 2001. Statistical data and studies, GUS. Warsaw; Łódzkie Region's Statistical Annual, Łódź Office of Statistics, Łódź 2001

The legally protected and environmentally most valued areas in Łódzkie Region in 2000 totalled at 296 998.8 ha, which accounted for 16.3% of the Region's overall area (1 124 m² per inhabitant, which places the region on the last but one position in Poland, better only to Silesian Region (Województwo Śląskie); as regards the size of the legally protected areas, Łódzkie Region comes last. It should be noted, however, that there exist certain inconsistencies between the official data concerning, e.g. the environmentally most valuable and legally protected areas (GUS statistical data), and the findings of the Biuro Planowania Przestrzennego Województwa Łódzkiego – BPPWŁ, (Łódzkie Region Spatial Planning Department) whose studies were based on the regulations issued by the Regional Governor (Wojewoda) and local byelaws; these discrepancies should be explained by the Regional Environmental Conservator (Wojewódzki Konserwator Przyrody). Pursuant to the decisions of the BPPWŁ, the areas under protection occupy more than 22% of Łódzkie Region.

In direct proximity to Łódź there exists the Łódź Heights Landscape Park, located N and NE of the city and covering 10 747.2 ha (one of the smallest in the Region). This park, for its location, is under very strong anthropopressure – hence it is necessary to complete the works on its protection plan and the implementation of its postulations, which will require the borough authorities to develop their local spatial development plans. The professional considerations that were the basis of the 2002 Spatial Development Plan (Plan Zagospodarowania Przestrzennego) of Łódzkie Region developed by BPPWŁ in Łódź, helped to put forward the righteous idea of extending legal protection over further areas in Łódzkie Region (nature & landscape reserves, protected landscape areas, nature reserves) – map F. These areas would enrich the ecological system of central Poland, strengthen the national position of Łódzkie Region, and would also lead to a better situation regarding recreation for the inhabitants of Łódź and other towns in Łódzkie Region.

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