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TYPOLOGY OF NATURAL LANDSCAPE IN POLAND ON THE SCALE OF 1 : 500 000

Landscape in Polish, like in many other languages, is an ambiguous notion which is also employed in everyday speech to designate a view. In physical geography this term is most frequently used as a synonym of a geocomplex. Thus, landscape designates any fragment of the epigeosphere, no matter what size, delimited by natural borders and constituting a whole because of connections and dependences within its structure.

Landscape understood in this way is hierarchically classified by many authors. One of such classifications is shown in the map of types of natural landscape in Poland on the scale of 1 : 200 000 prepared by J. Kondracki in 1960 (see: Kondracki, 1960). The map (Fig. 1) divides Polish landscape into three classes, i.e. lowland, upland and mountainous ones. These classes are further divided into sorts of landscape which, in turn, are cut into kinds of landscape.

According to J. Kondracki, the leading factor on lowlands is the genetic type of relief. Both sorts and kinds of landscape are characterized by a different origin; yet morphometric features were also taken into account for the delimitation of the latter. Upland landscapes are divided on the basis of lithology, since no vertical zones occur within uplands which include elevations of 200 to 600 m a.s.l. in Poland and their relief is erosional everywhere. The factor which clearly takes the leading position within mountainous landscapes is the elevation above sea level and vertical zones connected with it.

The demand from planning bodies for having synthetic frames to natural conditions has recently resulted in the necessity to prepare a more detailed typology of natural landscape. Work carried out on this issue is connected with the activity of the working group set up within scientific cooperation between the C.M.E.A. countries. The aim of the group, led by G. Haase from the German Democratic Republic, is to

prepare diagnostic landscape maps on a review scale for the particular countries.

A general concept of a new, more detailed classification of natural landscape in Poland was prepared by a group from Warsaw University, including J. Kondracki. Next, this concept was discussed in broader circles and, after some modifications it had been applied as a basis for an elaboration prepared in cooperation with nearly all the university centres in Poland.

The initial pattern has been expanded, additional classes of landscape have been introduced, the number of sorts of landscape has been increased and the division of sorts into kinds of landscape has been made detailed. Finally, the differentiation has been introduced within kinds of landscape by means of delimitation of units of a lower rank called variations of landscape.

The first place in the class of **lowland** landscapes was given to the division into plains, hillocks and hills, with the origin of forms taken into account in the second place. Sorts of landscape delimited in this way are more unequivocal and easier to be marked on the map. In the next stage plains were divided into accumulation and denudation plains, while hillocks and hills into eolian or glacial and glaciofluvial ones. The full division of lowland landscapes is the following:

Sort of landscape	*Kind of landscape*
A. Flat and rolling	1. Accumulation fluvioglacial and marine
	2. Accumulation glacial
	3. Denudation periglacial
	4. Denudation with dust accumulation
B. Hummocky	1. Eolian
	2. Glacial and glaciofluvial
C. Hilly	1. Eolian
	2. Glacial and glaciofluvial

Upland landscape was divided according to J. Kondracki's original concept. Three sorts of landscape were delimtied on the basis of lithology. Their further division is aimed at taking into account dissection as well as size and compactness of forms. These assumptions take the following form in practice:

Sort of landscape	*Kind of landscape*
A. Loess	1. Slightly dissected high plains
	2. Strongly dissected high plains

B. Carbonate and gypsum	1. Compact massifs with klippes
	2. Hills
C. Siliceous and aluminosiliceous	1. Forelands and low mountains
	2. Hills

The primary factor within **mountainous** landscapes is the altitude above sea level. It decides about the division into sorts and kinds of landscape.

Sort of landscape	*Kind of landscape*
A. Highland	1. Lower subalpine forest (broadleaf forests)
	2. Upper subalpine forest (coniferous forests)
B. Alpine	1. Dwarf mountain pine
	2. Alpine meadows
	3. Rock towers
C. Intermontane basins	1. Accumulation plains
	2. Rolling erosional plains with residual hills

A separate class is composed of **valley landscapes** which are divided into: A. Valley bottoms flooded at present or in the past

B. Overflood terraces

C. Vast accumulation plains

These delimitations were given the rank of sorts of landscape without further differentiation into kinds.

Apart from that, **anthropogenic** landscapes are treated as a class and have been divided into two groups: urbanized on the one hand and industrial and mining ones on the other.

The further division into variations of landscapes is based on homogeneous criteria for the whole country. It was assumed that delimitation of variations of landscape depends on two elements: lithology and way of land use.

Lithology was examined in two groups: massive rocks (prevailing on the surface of land in upland and mountainous landscapes) and loose formations occurring mostly in lowland landscapes. Rocks are divided into magmatic and metamorphic as well as sedimentary rocks which are further divided into coarseclastic rocks with prevailing sandstones, fineclastic ones with prevailing shales, carbonate rocks with prevailing limestones and dolomites and carbonate rocks with prevailing marls. The remaining formations were examined after dividing them into dusts, clays, loams with loamy sands, sands, sands with gravels, peats and mineral formations in bottoms of valleys and depressions.

Land use, treated in a very general way, resulted in the delimitation of agricultural, meadow and woodland areas and wastelands.

This procedure has led to the delimitation of 5 classes, 14 sorts, 26 kinds and 89 variations of landscape. The map is supplemented by a table including the information which is omitted on the map because of the scale. This primarily refers to soils and vegetation. Authors of different map sheets analysed variations of landscape one after another, describing soil and vegetation types attached to them. The table shows those patterns which are characteristic of a given variation of landscape and those which occur sporadically.

The map is being prepared with the intention to use it in spatial planning on a national or regional scale, i.e. for the planning of administrative units of a higher order. Different types of landscape are characterized by definite types of usefulness for various forms of man's activity and may be used as basic fields for planning on optimum way of management of natural resources.

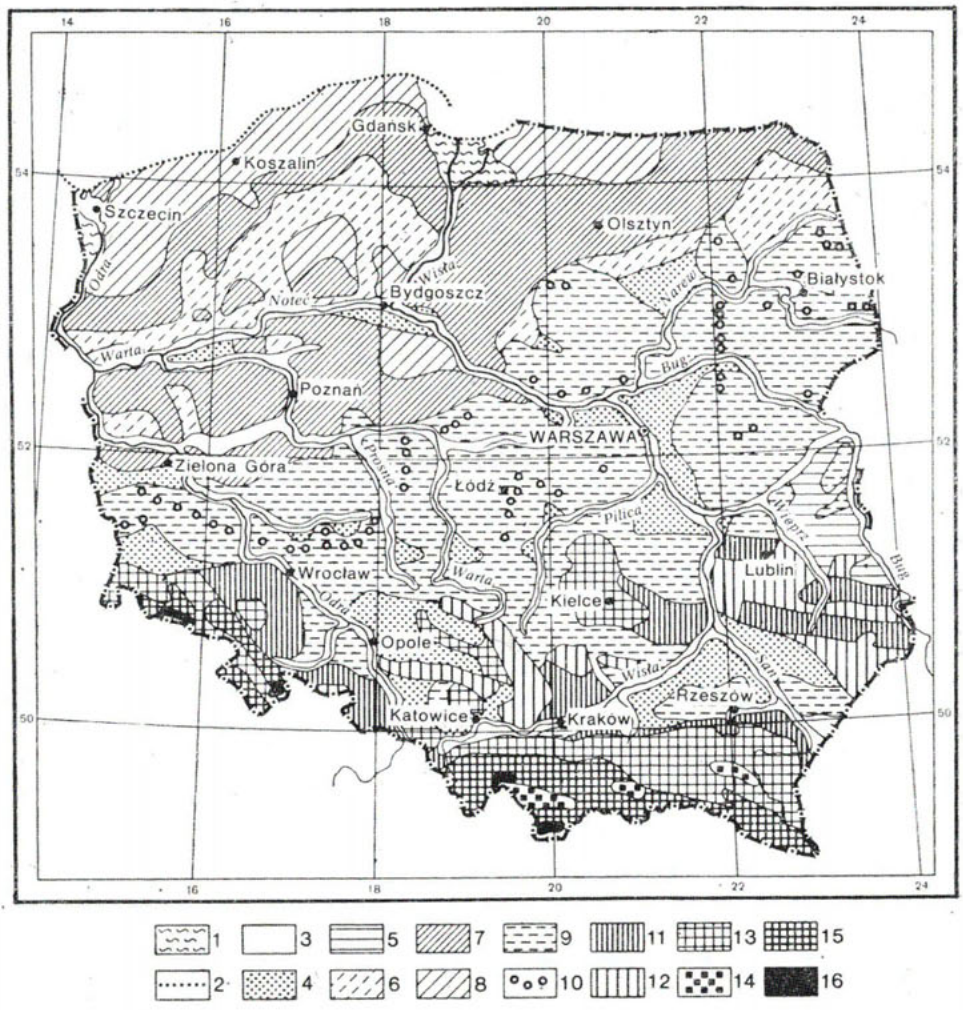

Fig. 1. Types of natural landscapes according to J. Kondracki

1 — deltaic, 2 — dune-seaside, 3 — flood terraces, 4 — dune terraces, 5 — fluviolacustrine, 6 — sandy-lacustrine, 7 — hummocky-lacustrine, 8 — flat morainic, 9 — denudation plains, 10 — residual hills, 11 — loess upland, 12 — carbonate upland, 13 — siliceours upland, 14 — intermontane plains, 15 — mountainous of the lower subalpine forest, 16 — mountainous of the upper subalpine forest, subalpine and alpine

REFERENCE

Kondracki, J., "Types of Natural Landscape (Geographical Environment) in Poland", *Przegląd Geograficzny*, Vol. 32, 1960.