

Spatial and functional changes of settlement network in the Łęczna-Włodawa Lakeland since the 1930s

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Abstract

The paper presents an analysis of spatial differentiation of settlement features and an evaluation of main directions of changes in the functional and spatial structure and in the character of villages in the Łęczna-Włodawa Lakeland over the period from the 1930's till the end of the first decade of the 21st century.

Differentiation of natural conditions, as well as situation at the border of two cultural areas – the Polish and the Ukrainian, permitted the identification of three settlement zones within the area of the Łęczna-Włodawa Lakeland: A) the western zone, both formerly and currently inhabited mainly by Poles, fairly densely populated till now; B) the transition zone, where formerly Polish and Ukrainian settlement merged, with formerly low and currently medium density of population; C) the eastern zone, that until the 1940's was mainly inhabited by Ukrainians, formerly with medium and now with generally low population density. Within those zones also sub-zones were identified (A1, A2 etc.), differing mainly in distinct types of traditional spatial structure of villages and in the character of contemporary housing.

Over the 80-year period under study, dynamic changes have taken place in the spatial structure of settlement within the area of the Łęczna-Włodawa Lakeland.

In the first part of the period studied, lasting from the 1930's to the 1970's, a decrease in the built-up area was recorded in as many as 32% of the villages, related mainly with war losses and population dislodgement operations. This concerned mostly the eastern zone, where the level of the shrinkage was as much as 64%, and partially also the central zone. Stand-alone housing disappeared over the whole area of the Lakeland. Spatial development took place mainly in commune centres and certain villages situated on the main roads of the region. In total, increase in the built-up area was recorded in 19% of all villages, primarily in the western zone.

In the second part of the studied period, lasting from mid-1970's, mainly in the south-western part of the Lakeland, i.e. in sub-zones A2 and B2, and also in the north-eastern part (sub-zone C1), there took place an intensive expansion of recreational building, often with very low aesthetic values. Overall, spatial development within that period was noted in 29% of all villages, more than a half of which owe that development to the tourist function of the area. New settlements and centres were built outside of the existing village systems, with no respect to the tradition of the cultural heritage of the region. Also, there reappeared scattered distribution of buildings within the landscape. This led to a disturbance in the structure and character of the village-type of settlement systems. And to the degradation of nature and landscape values of the area. At almost all remaining villages (71%) no significant changes were observed in the size of the built-up areas.

In the first decade of the 21st century new summer housing began to appear also within the existing villages.

A great majority of villages in the area still retain their agricultural functions. Over the last 3 decades, however, the importance of those functions decreases to the advantage to farm-tourism and recreation. In many villages, especially in commune centres and in villages situated in suburban areas, there is development of the industrial, services and housing functions. On the other hand, there has been a reduction in the number of villages whose inhabitants live mainly off fishery and forestry. There are also ongoing fundamental changes in the architecture and general appearance of the villages.

It is expected that further evolution of the settlement network of the region studied will be related primarily with the development of farm-tourism, nature tourism and services, and in some of the sub-zones – with intensification of agricultural production. The next decade may be of key importance for the evolution of new quality in the landscape of villages of West Polesie.

1. Introduction

The Łęczna-Włodawa Lakeland is an area where from the 1930's notable changes took place in the spatial and functional structure of settlement. The changes were caused by the military operations of the war, shifts of the national borders, vast transformations in natural environment and in land ownership structure, fundamental shifts in the concepts of economic utilisation of the resources and values of the region, development of a system of protected areas, and development of the system of local self-government. The varied rates of intensity

of those factors caused the high dynamics and variation in the spatial development of the individual villages within the studied area.

The objective of the study was presentation of the differentiation in the character of settlement in the area of the Łęczna-Włodawa Lakeland, and characterisation of the main directions of changes in the functional and spatial structure and in the character of the villages over a period from the 1930's till the end of the first decade of the 21st century.

This is of particular importance for proper management of the structure and functions of the settlement network of the region in the future, and for the protection of the unique landscape of Polesie against the negative phenomena related with the processes of chaotic urbanisation.

2. Study area and method

The study included all villages with village administration, situated in the Łęczna-Włodawa Lakeland, within the boundaries of the "West Polesie" Biosphere Reserve (139,917ha), as well as villages that are functionally connected with the administrated ones. Additionally, the study included also villages that were depopulated after 1945, and also certain settlements that are not villages with autonomous administration yet function as autonomous settlement units. The study included also characterisation of the only town situated within the Biosphere Reserve, i.e. Ostrów Lubelski, and three towns – seats of administrative districts (Łęczna, Parczew, Włodawa), situated outside of the boundaries of the Biosphere Reserve, yet in its close vicinity and playing an important role in serving the settlement of the region. In total, 173 settlement units of the region were analysed, including 169 villages (Fig. 1).

For the determination of spatial changes in settlement of the area the authors used maps of the Military Institute of Geography in the scale of 1:100 000 (from 1937 and 1938), made available by the Map Archives of the MIG (1919 – 1939), topographic maps, 1:10 000 and 1:25 000 from 1973, 1976, 1984, and aerial photographs in the scale of 1:10 000 from the years 2002-2004, made available by the web portal geoportal.gov.pl. All the source materials were reduced to the uniform scale of 1:100 000 using Corel Draw 12. Based on the scale-modified material, determination as made of the scope of changes in the built-up area of each of the villages within the two main time-intervals under analysis - 1) from the end of the 1930's to the 1970's, and 2) from the beginning of the 1970's to the end of the first decade of the 21st century.

In the analyses carried out two levels of intensity of development or regress of villages were defined. High – when within the time interval studied the built-up area of a given village increased or decreased by more than 20%, and low – when the observed changes amounted to from 5 to 20% of the built-up area.

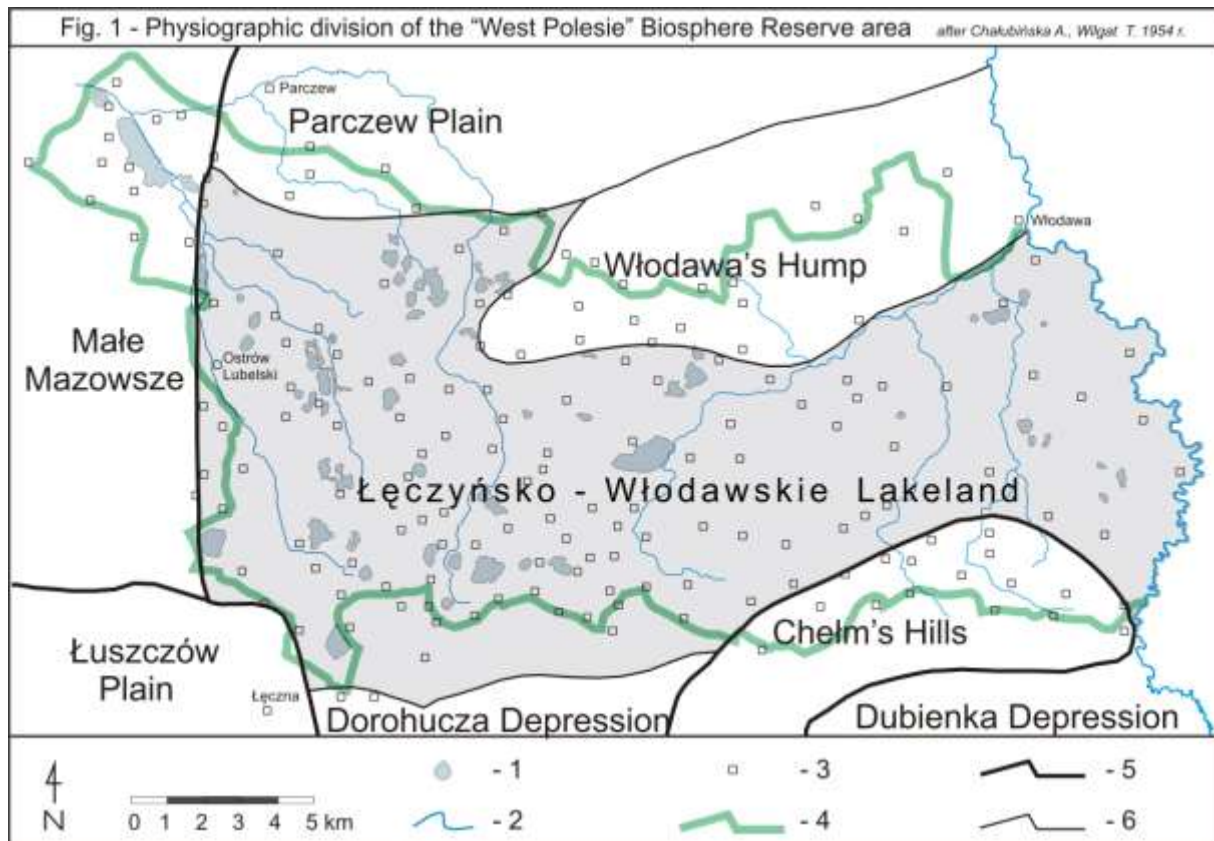


Fig. 1 – Physiographic division of the study area with marked out boundaries of the “West Polesie” Biosphere Reserve

1 – lakes and ponds; 2 – rivers; 3 – analysed villages; 4 – boundary of the “West Polesie” Biosphere Reserve; 5 – boundaries of physiographic regions; 6 – boundaries of physiographic subregions (after A. Chałubińska and T. Wilgat 1954)

The second part of the study was devoted to analysis of the contemporary functions of the particular localities, and of changes in those functions over the past eight decades. Data for the determination of those functions originated from the development strategies of the particular communes and from other commune documents, from literature, and from interviews conducted in all the communes of the region. The primary criterion in the estimation of the importance of a function for a given locality was the number of people related with that function. Specific functions (e.g. housing, services, recreation, industrial etc.) were assigned to the localities in which a given centre (of industry, services, etc.) is located, and not to those from which the employees of that centre came. It was assumed that a given

function was important for a specific locality when the number of people involved (together with the members of their families) constituted at least 15% of the total population of that locality. In certain cases also the area occupied by a given function (e.g. summer houses) was taken into account. In such cases it was accepted that the function was important if the related buildings constituted at least 10% of the total built-up area of a given village.

3. Results

3.1. Zonal differentiation of settlement

Intensive development of settlement in the studied area took place in the 15th and 16th centuries, i.e. after the fertile areas of the Lublin and Volyn Uplands had been settled and brought under agricultural use. The natural conditions caused that the density of population in the studied area was always low compared to the neighbouring regions. The very distribution of the villages reflected the natural conditions, concentrating along the main rivers (Bug and the left bank of Tyśmienica) and on the more fertile areas, raised above the dominant wetlands (Olszewski, Szczygieł 1991; Horoch et al. 2001; Chrzanowska et al. 2006). Another important factor was the situation of the area on the border of two cultural areas – the western, i.e. Polish, and the eastern, i.e. Russian or Ukrainian. The differences in nationality were also reflected here in the differences in religion. Those factors were the basis for the division of the study area into three main zones. The western zone, both formerly and at present inhabited mainly by Poles, is the most densely populated. The central zone is an area where formerly the Polish and the Ukrainian settlement movements merged, and due to the presence of extensive and inaccessible wetlands, until the 1950's the population density was very low. At present – following the accretion of most of the peatbogs and wetlands and the development of tourism infrastructure on the lakes, the population density in the central zone is moderate. The eastern zone, in which until the 1940's the villages were mostly inhabited by Ukrainians, is currently characterised by a generally low population density. Only in its northern part, near the town of Włodawa, there has been intensive development of summer houses and infrastructure.

Each of those zones can in turn be divided into smaller parts (sub-zones), characterised by somewhat different settlement structure (Fig. 2).

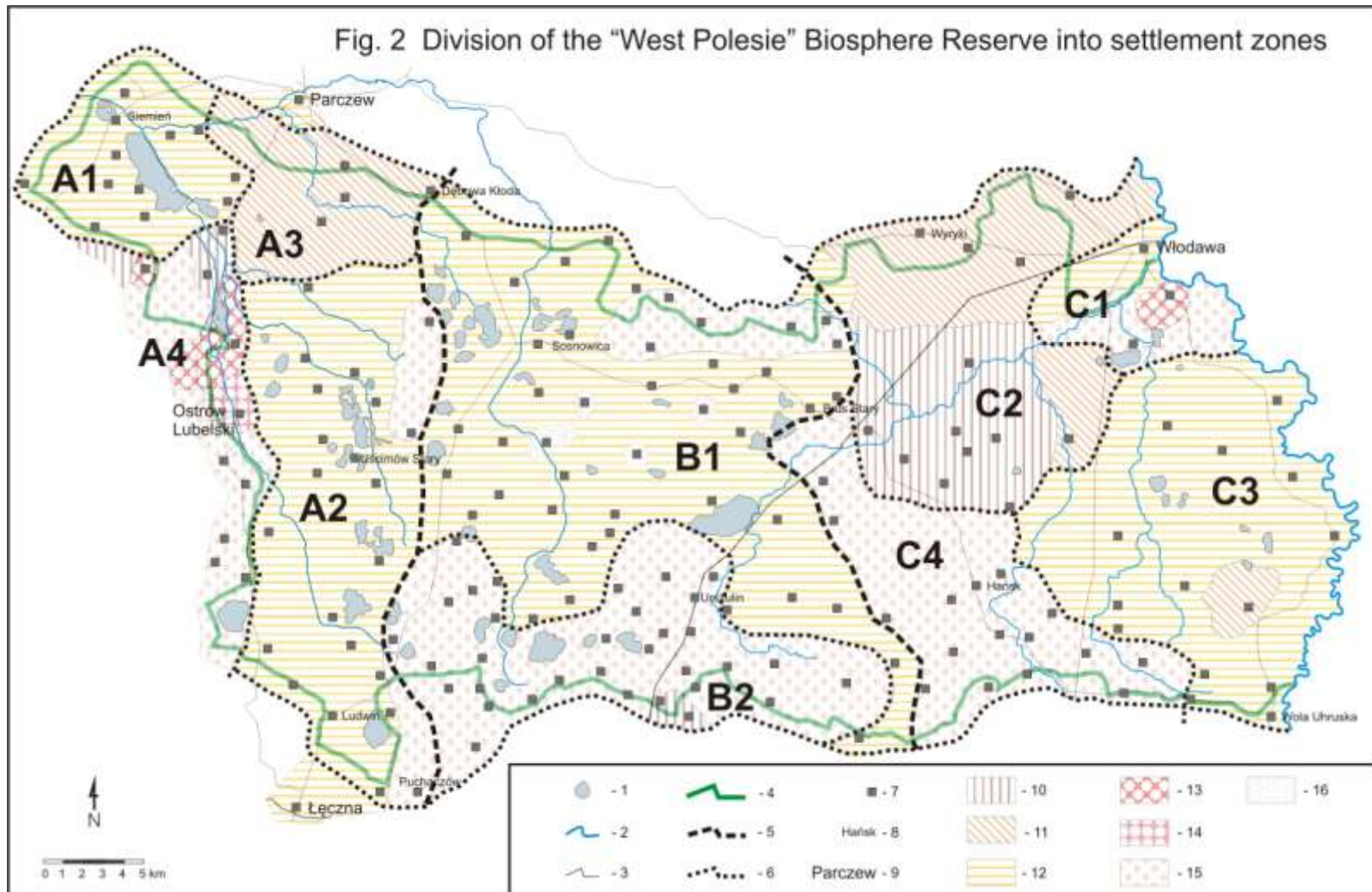


Fig. 2 – Division of the “West Polesie” Biosphere Reserve into settlement zones.

1-lakes and ponds; 2-rivers; 3-main roads; 4-boundary of “West Polesie” BR; 5-boundaries of settlement zones; 6-boundaries of settlement sub-zones; 7-analysed localities; 8-villages – commune centres; 9-towns.

Types of spatial structure of Polesie villages in 1947: 10-ribbon village; 11-row village; 12-strung village; 13-forked village; 14-chaotic multi-lane village; 15-scattered village; 16-hamlet (after E. Duszyńska1947)

The zonal character of settlement is clearly affected by the natural conditions. Greater population density and village size are characteristic of areas with conditions more favourable for the development of agriculture – with a lower share of bogs and forests and with better soils (sub-zones A1, A2, as well as sub-zone C1, where additionally there was a strong influence of the neighbouring town). A notably lower density of villages is characteristic of areas with large forest complexes, such as sub-zones A3, C2 and C3, and partially also B1. The greatest scattering of small-scale settlement was observed in sub-zones A4, B2 and C4. Those areas are characterised by large wetland areas that are either left unused or else are used only as meadows and pastures.

Therefore, the scattered village type, dominant in those sub-zones, is related with the relief of the area, with the water relations (e.g. low ground water level) and with the forest cover. These relations are supported by examples given by authors from other regions of Poland (Duszyńska 1947; Radwan-Dębski 1990; Soszyński et al. 2006).

3.2. Changes in population density and spatial structure of villages

From the beginning of the 20th century in the area under study there began significant changes in population density, caused by a succession of dislodgements. The first of those was the so-called “Biezhentstvo”, when during World War I most of the Orthodox population of the region was evacuated deep into the Russian Empire. Some of the evacuees gradually returned, but not until at least a dozen years later. During WW II there was the large-scale extermination of the Jewish population that mostly inhabited the bigger towns of the region, but also such former small towns as Urszulin and Sosnowica, and also, though in small numbers, certain villages. Also during World War II the region was left by the German population (from the German colonisation of the 19th century) that constituted a notable share of the inhabitants of several villages in the southern part of the study area (e.g. Michałów, Nadrybie, Kulczyn, Ujazdów).

However, the most significant reduction in the population of many villages, especially in the eastern part of the region, took place after WW II, between 1944 and 1947, and was related with the initially voluntary and then forced migration of a part of the population, referred to as the Russians or Ukrainians (mainly members of the Orthodox Church), to the Ukraine and Russia, as well as to the western regions of Poland (Operation “Vistula”). As a result of those expulsions, many villages became significantly depopulated, frequently to less than a half of the former number of inhabitants. There are also villages and hamlets from which nearly all inhabitants were expelled, and until now there are only sparse traces of

former dwellings, such as old cellars, some fruit trees, or single abandoned cottages or farm buildings. Examples of this are such villages as Ostrówek Kołacze, Starzyzna Leśna (Fig. 3) and the hamlets Iwanki n. Suchawa, Irkuck n. Żłobek and several others. Larger villages that suffered such expulsions usually exist till now, but their populations have significantly shrunk (e.g. Hola, Podgórze, Szczęśniki, Żłobek). In many other villages the drop in population has been less severe. Generally, however, the dislodgements had a significant effect on a majority of villages in the eastern and also in the central part of the region under study (subregions B1, C2, C3 and C4 and, to a lesser degree, B2) (Fig. 4). Overall, in the first period under analysis, i.e. from the 1930's until the 1970's, a reduction in the acreage of the built-up area was recorded in 32% of all the villages of the region, while for the eastern part alone that share is as high as 64%.

Among those villages that did not suffer from the population dislodgements, only a few (19%) have undergone spatial development, mainly in the western zone.



Fig. 3- The area of the depopulated village Starzyzna n. Żdzarka (Photo D. Soszyński, 2008).

Spatial and economic development took place primarily in commune centres (11 villages), being the centres of local administration, services, education, as well as manufacturing activity. During the socialist era those villages were frequently chosen for the establishment of state farms and farming cooperatives, which usually entailed the construction of blocks of flats for the workers of such farms and for the personnel of administration, education and health service. Usually, commune centres also have a better road network and public transport facilities, which is conducive to development. Among the villages that are

commune centres only Wiryki has recorded a shrinkage of the village built-up area. In this case the dislodgement of a significant part of the population during the war prevailed over the post-war development of the village.

In certain cases, an important factor inducing development was the creation of State Farms, typically located in the area of former grange buildings (e.g. Andrzejów), and in exceptional cases at totally new sites (e.g. Turno).

In that period, in the studied area there were only isolated cases of development of a locality due to industrial growth. This relates mainly to the industrial plant in the village of Dubeczno, dating back to the interwar period, as well as to the industries created already after WW II, in the villages of Orchówek and Bogdanka.

In the 1970's the first summer recreation resorts appeared on the lakes Białe Włodawskie and Piaseczno. Their creation resulted in a growth of the total built-up areas of some of the neighbouring villages (Białka, Okuninka). In other localities, the creation of recreation centres on lakes was compensated for by earlier shrinkage of village built-up area, which in the overall assessment was classified as stagnation of a given village. The construction of recreation facilities around lakes did not contribute to the development of old villages, but rather created new centres of urbanisation, aggressive towards the nature and competitive with relation to the traditional villages.

Changes in the form of village development can be observed in almost all villages that were composed of scattered housing before the war. Until the 1970's, the fastest to disappear were usually the peripheral parts of villages, situated in the most inaccessible areas, e.g. surrounded with wetlands and forests.

In a number of villages situated on the main roads there appeared the process of stretching of new housing along those roads (e.g.: Uścimów Stary, Kolonia Orzechów, Buradów, Dratów, Wytyczno, Dębowa Kłoda, Dubeczno). Another factor contributing to the development of new housing construction, related to transportation, was the railway. It was thanks to the railway that new housing development took place in the village of Gródek, where a large storage and manufacturing facility was built, as well as in the locality of Sobibór – Stacja, where a cargo handling terminal was created.

Apart from the above examples, the size and form of most of the villages did not undergo any significant change during that time. The numerous strung and row villages of the area, as well as the ribbon villages with their characteristic architecture of wooden Polesie huts, in their majority retained their character up till the end of the 1970's, and in some of the villages – even till the second half of the nineteen eighties (Fig. 5 and 6).

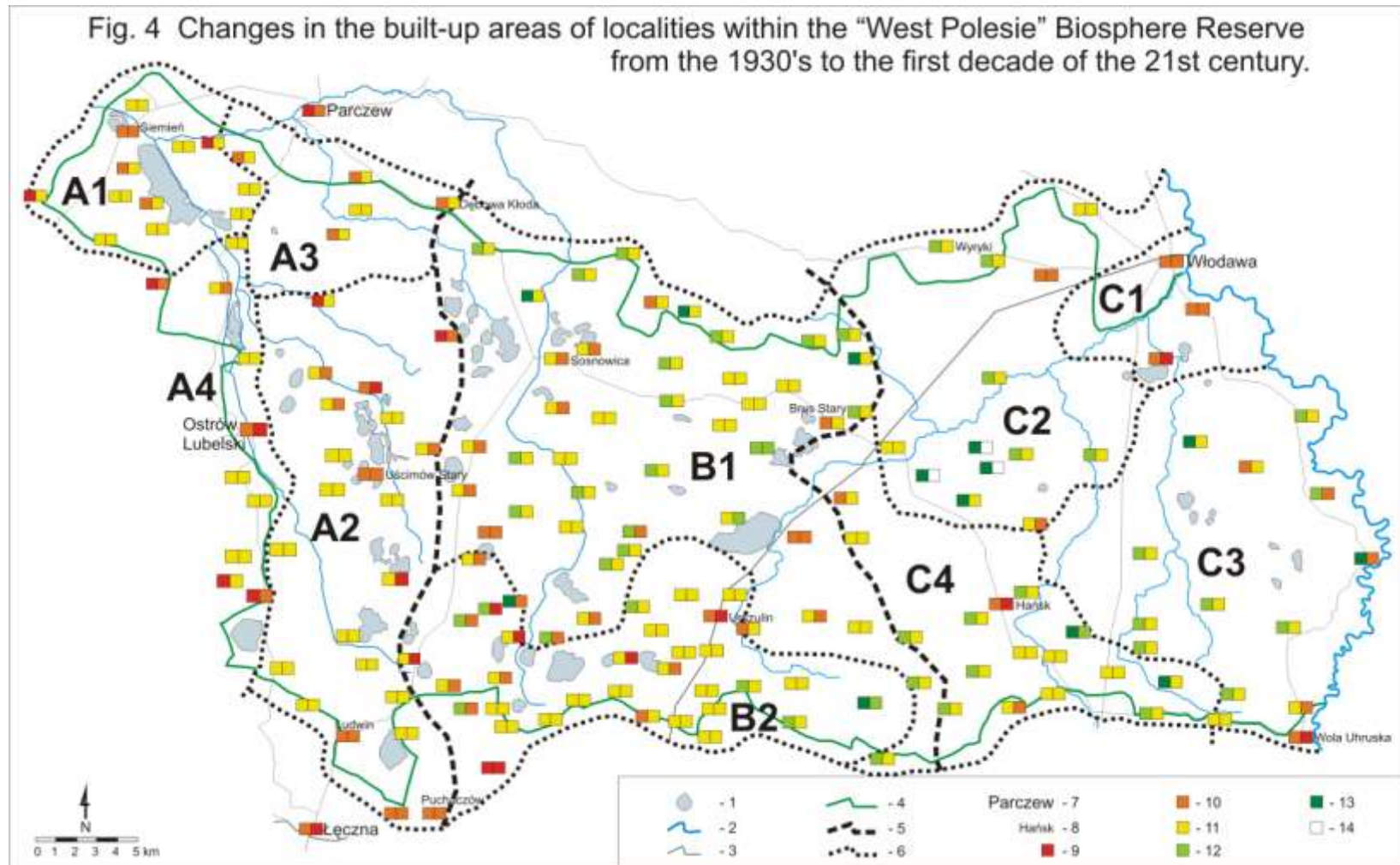


Fig. 4 – Changes in the built-up areas of localities within the “West Polesie” Biosphere Reserve from the 1930’s to the first decade of the 21st century.
 1-lakes and ponds; 2-rivers; 3-main roads; 4-boundary of West Polesie BR; 5-boundaries of settlement zones; 6-boundaries of settlement sub-zones; 7-towns; 8-villages – commune centres.
 Changes in built-up areas (first square from left denotes changes in built-up areas of particular localities from the pre-war period to the 1970’s; second square – from 1970’s till the first decade of the 21st century): 9-intensive growth (over 20% growth of area); 10-moderate growth (from 5 to 20% growth of area); 11-stagnation; 12-regress (from 5 to 20% decrease of area); 13-significant regress (over 20% decrease of area); 14-depopulated/deserted villages.



Fig. 5 – Lejno, a traditional Polesie village, in mid-1980's (Photo T. J. Chmielewski)



Fig. 6. Polesie cottage in the village Wola Wereszczyńska in 1988 (Photo T. J. Chmielewski)

In the second period under analysis, i.e. from the 1970's until the end of the first decade of the 21st century, the dominant process was dynamic development recreational buildings. This concerns primarily the south-western part of the Lakeland, i.e. subregions A2 and B2, and also subregion C1 in the north-eastern part (Fig. 4). Around many lakes there appeared recreation resorts and summer housing areas. Their relation with the particular villages is varied, but in many instances one can refer to the appearance of new independent settlement units (viz. the buildings on lakes Łukie, Piaseczno, Zagłębcze, Tomaszne and others). In a great majority of cases those buildings are of very low standard and with architecture that is totally alien to the cultural traditions of the region, which results in a significant degradation of the landscape (Fig. 7).



Fig. 7. Summer cabins on Lake Tomaszne (Photo T. J. Chmielewski, 1998).

Another type of tourist utilisation of rural areas is the purchasing, by city dwellers, of old wooden cottages built in the regional style, and using them as summer cabins. At the same time one can observe the village people building new large multi-room houses for use as farm-tourism facilities (Fig. 8). Both of these types of objects are usually surrounded with attractively arranged house gardens. This phenomenon can be encountered not only in villages situated in the vicinity of lakes that are the most attractive for tourists, but also on the river Bug (Wolczyny, Zbereże), in enclaves of larger forest complexes (Bójki, Czołoma), or in other localities with attractive landscapes (e.g. Hola, Kamień, Załucze Stare).

Generally, however, the development of the recreational function of the region after 1970 resulted in renewed scattering of settlement that, contrary to that before WW II, often

proceeds in a chaotic manner and constitutes serious degradation of the most valuable areas in terms of their nature and landscape values (Chmielewski 2001, 2006).

Overall, in the second period under analysis, spatial development was recorded in 49 villages (29% of all localities analysed). As many as 29 villages owe their development primarily to the tourism function. The remaining 20 villages that grew in terms of built-up area are mainly commune centres (e.g. Uścimów Stary, Ludwin, Sosnowica, Urszulin, Hańsk), localities with industrial plants (Bogdanka, Dubeczno, Orchówek) or with large-area farms (Wincencin, Petryłów) and big fisheries (Sosnowica Dwór, Tyśmienica).



Fig. 8 „Karczma Poleska” („Polesie Inn”) – a farm-tourism facility with own restaurant, located in the village of Kołacze (Photo E. Kowalik, 2008).

During that period of time in almost all other localities (71%) no significant changes were observed in the size of their built-up areas. Whereas, in the locality of Nowiny, situated near the boundary of the Polesie National Park, and in several hamlets located within the Park area, there took place an observable regress of built-up area that results from nature and legal conditions unfavourable for development.

Highly important for the functioning of the settlement network of the region under study is the development of towns – district centres, located in the vicinity of the Biosphere Reserve, namely the towns of Włodawa, Łęczna and Parczew. Those town, originally located

on important trade and transport routes, had good conditions for development, but following a period of glory in the 16th and 17th centuries, began to decline. World War II brought about particularly large population shrinkage to all three of them, caused primarily by the extermination of the Jewish population that constituted 53% of the total population in Łęczna, 60% in Parczew, and 66% in Włodawa (Olszewski, Szczygieł 1991; Horoch et al. 2001; Chrzanowska et al. 2006). Following the shift of the national border in 1945, the trade and transport routes of the region lost their importance, and all three towns suddenly found themselves in a peripheral situation. It was only the industrial development in the socialist era, especially in the area of Łęczna (with the neighbouring Hard Coal Mine), and the construction of new housing quarters in the large-panel technology, that caused new spatial development of those centres.

3.3. Development and regress of the functions of the localities

At present, the area of the Łęczna-Włodawa Lakeland is characterised by a high percentage of villages with recreational function. The agricultural function, dominant in the area for centuries, is still very important, but its significance declines gradually (Fig. 9). High importance of the recreational function was recorded in as many as 36 villages, which constitutes 21% of all analysed localities. This phenomenon is especially common in subregions A2, B2 and B1, though it is also significant in the other subregions.

The remaining functions, such accommodation, services and educational, occur mainly in the towns – administrative district centres neighbouring the study area. At a smaller scale they are also important for certain larger villages that are usually seats of the commune authority. The accommodation function is concentrated mainly in those villages where blocks of flats were built, originally serving the workers of State Farms and Farming Cooperatives, as well as employees of administration, small industry and health service. This situation is exemplified by such villages as Brus Sary, Hańsk or Gródek.

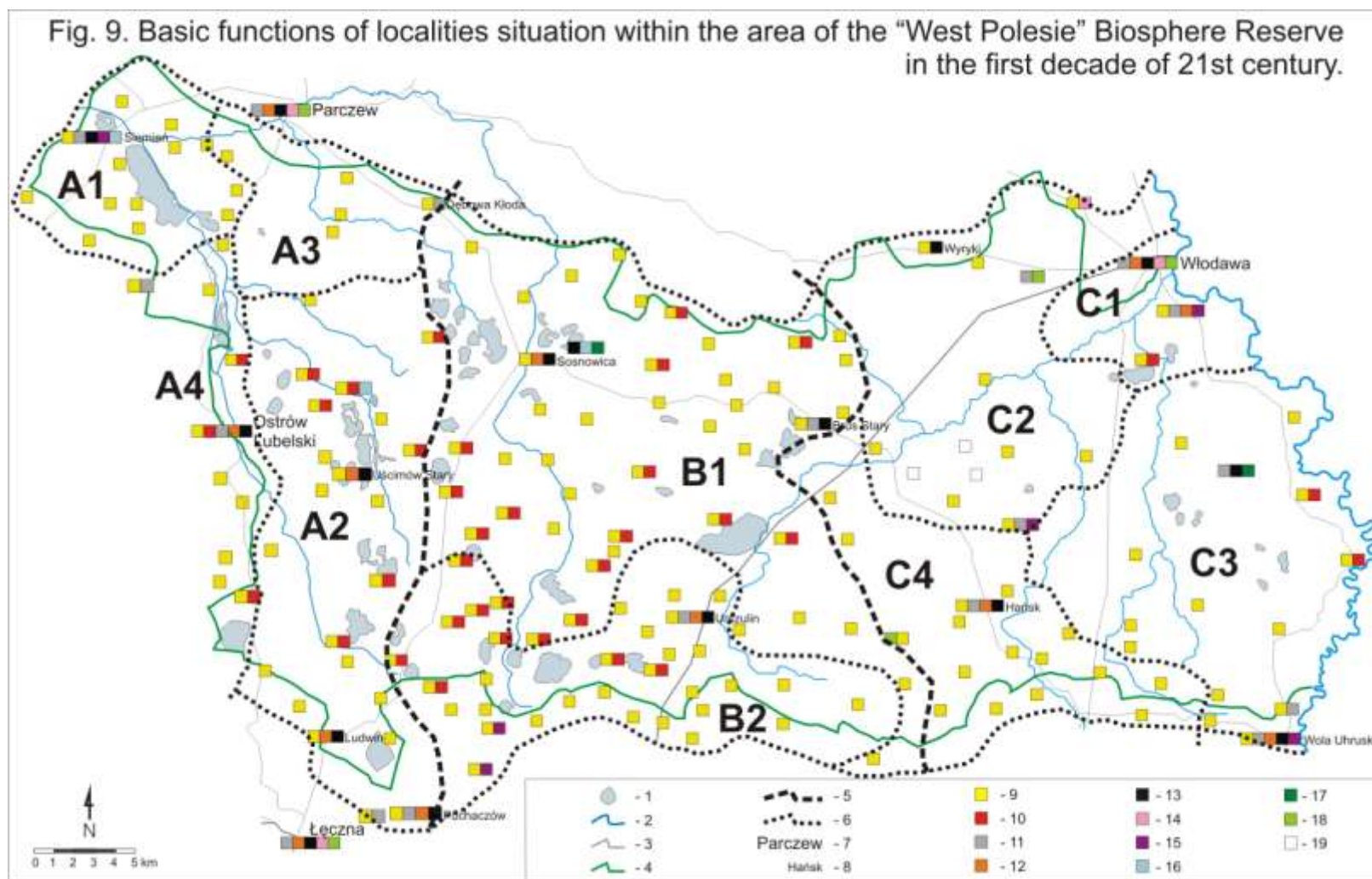


Fig. 9. Basic functions of localities situation within the area of the “West Polesie” Biosphere Reserve in the first decade of 21st century.
 1-lakes and ponds; 2-rivers; 3-main roads; 4-boundary of “West Polesie” BR; 5-boundaries of settlement zones; 6-boundaries of settlement sub-zones; 7-towns; 8-villages – commune centres;
 Leading functions of the localities: 9-agriculture; 10-recreation and summer holidaymaking; 11-housing; 12-services; 13-administration; 14-education; 15-industry; 16-fishery; 17-forestry; 18-health service; 19-depopulated/deserted villages

At present, in many localities also new individual housing settlements are being developed (Adampol, Urszulin). This tendency appears more and more often, especially close to towns – centres of administrative districts, and in localities situated close to the main roads. Altogether, a significant level of the housing functions was recorded for 13 localities.

The services function, with a moderate range and standard of services offered, has developed only in larger commune centres (9 localities), but its importance is on the increase. Those centres play also the basic administrative functions. In some villages the Commune Office is one of the main employers (Stary Brus, Wiryki). There are villages, however, where that function is still more important, due to the presence of such institutions as the Head Office of the Polesie National Park in Urszulin, or the Forest Inspectorate in Sosnowica (Chmielewski 2001). Over the past several decades, changes in the importance of the administrative function in the particular localities are closely related with changes of commune centre locations. After 1954, 6 villages lost the status of commune centre (Sobibór, Zbereże, Wołoskowola, Tyśmienica, Babianka, Wola Wereszczyńska), while new commune centres, established in 1973, are the villages of Wola Uhruska, Stary Brus and Urszulin. The obtainment of the status of the basic administrative unit by a village usually entails also development of other communal services. One of the more important ones is education, though this is primarily of local importance. Above-local importance may only be attributed to schools in the district towns and in the village Kolorówka, where there is the Complex of Schools of Agriculture, with subregional importance.

Localities with an industrial function are sparse in the area. The largest industrial plants are located outside of the district towns, which is a result of strong effect of natural conditions. The main ones are the Hard Coal Mine in Bogdanka and the Glass Works in the village of Dubeczno. The remaining industrial plants – of lower importance – are located in the district towns and in some of the commune centre villages (Siemień, Wola Uhruska). Several localities have lost their industrial functions as a result of the transformation of 1989 (Orchówek, Gródek).

Fishery in the area studied is now of lower importance than in the inter-war period, when it was the fundamental function for the existence of some villages. Two large fish farms still exist, in the villages of Siemień and Sosnowica Dwór. Others, such as those in Jedlanka, Stary Brus or Pieszowola, no longer play any significant role in the functioning of the villages. Likewise with forestry that used to be basis of existence for many mid-forest villages, such as Wiryki, Adampol, or the hamlet of Zacisze n. Sosnowica. The forestry

functions has been retained only by a few small settlements that are now the seats of forest inspectorates - Sosnowica Dwór and Sobibór Stacja.

The last function present in the studied area, and not a typical one here, is the health service function in Adampol – a small mid-forest settlement where a Clinic of Tuberculosis and Pulmonary Disorders is located.

4. Conclusions

1. The “West Polesie” Biosphere Reserve has a typically rural settlement network, generally with a considerable degree of scatter. There are 169 villages on the area of ca. 140 000 ha. They are served by three small district towns situated close to the Reserve, and a small town situated within the transit zone of the Reserve.
2. Until the middle of the 20th century the villages of the region retained very well the characteristic types of traditional spatial structure. The dominant type was the strung village, and in some regions – the ribbon and row village types, with characteristic architecture of wooden Polesie cottages. Some of the villages kept that character as long as till the second half of the 1980’s.
3. In the traditional spatial structure of village settlement network of the region one can distinguish 3 zones: the western zone – with dominance of Polish settlement, the central zone – with a transition character, and the eastern zone – with greater presence of features of Ukrainian settlement. This division results from natural conditions and from historical ethnic and religion differences.
4. The forms of use of villages and recreational areas developed in the Łęczna-Włodawa Lakeland in the socialist period were a manifestation of discontinuation of the cultural heritage, local tradition and regional style of architecture. Another turn – also with the character of discontinuation – took place during the first 2 decades of market economy, at that time oriented solely at the fastest possible satisfaction of private needs, without care for general social values, including landscape quality. Only the moment of accession of Poland to the European Union and successive implementation of EU standards of nature and cultural environment quality brought about the first symptoms of care for the quality of landscape and for the conservation of cultural identity of West Polesie. However, numerous forms degrading the landscape of the region will remain for many decades to come.
5. The protection and conservation of elements of traditional spatial structure and architecture of Polesie that still exist in some of the villages, and popularisation and creative

development of the elements of cultural heritage of West Polesie, should be an important aspect of future functioning of the “West Polesie” Biosphere Reserve.

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