

## CHAPTER 1

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# LANDSCAPE FROM HISTORICAL AND CONTEMPORARY PERSPECTIVE

### Introduction

As early as at the beginning of the 19th century, the word – the landscape was not known in science at all. In the colloquial Polish language the word *landszaft* was used then, and much earlier in the 17th century the word *landczaft*, deriving from German language *Landschaft* – was used to describe the country, a vicinity (*Land*) as well as a view and a panorama (*Landschafts-bild*). Even from 10th century the word - *Landschaft* meant borders and the character of the administrative unit. In 15th and 16th centuries, in the period of Flemish painting peak development, that word gained a new meaning, a view (a landscape) shown by a painter. Only later that word started to use in a different meaning. To Polish language the word – the landscape has been introduced by Joachim Lelewel who used this definition in his monograph: “The history of Poland told with a colloquial way by Joachim Lelewel, who crossed twelve landscapes of to that history,, (*Dzieje Polski Joachim Lelewel potocznym sposobem opowiedział, do nich dwanaście krajobrazów skreślił*), published in Warsaw in 1830 (WOLSKI 2002). KOSTROWICKI (1983) states that the term „the landscape” went from the colloquial in scientific language in the middle of the 19th century in Germany.

### The term of the landscape according to different approaches

The content and the scope of the term - *the landscape* have so far not been unambiguously defined, because they are ambiguous, function in the different fields of science and allow certain latitude in its using (BAJEROWSKI and CYMERMAN 1992, MAGIERA - BRAŚ, 2000). The review of various definitions of the landscape in natural sciences has been carried out by RICHLING and SOLON (1998). In understanding that term we can, however, distinguish two clearly outlined approaches. First one, represented as the earliest by geographers, and afterwards replenished opinions of biologists, treats the landscape as the element of the ngeographical environment. The second approach, shaped by landscape architects mainly, limits only that interpretation to external, scenic and

aesthetical features, specific for a given area. According to CYMERMAN et al. (1992) it is a dynamic term and phenomenon which has itself many considered definitions, depending on the science character involving in the landscape.

OLACZEK (1998) expresses a view that the landscape has not only an aesthetical dimension (visual one), but it also has got the ecological content, because it explains interrelationships among processes setting in the environment, and its material elements of natural and anthropogenic origin. These connections take place in a real geographical space which under their influence takes on a definite dimension and character.

JAROSZ (1954) states, that the landscape is conditioned, first of all, by a geographical position, geological structure, the lie of the land, climate and – depending on these factors – network of waterways, soil, flora and the animal world. Next Schmithusen (1964) finds that the landscape is just the physiognomy of environment and determines the character of the area.

The similar opinion presents KONDRACKI (1978) proving, that the landscape in geographical perspective is: “the type of an area having a peculiar structure which consists of a mutual connection of the lie of the land and its lithological composition, water, climatic, biocenotic and soil relationships as well as the modification of natural conditions as the effect of the human economy”. *The dictionary of geographical terms* (1973) defines that term as, “the sum of typical features, specific for a given fragment of the surface of the earth, which individual elements such as the lie of the land, soil, climate, water, flora and the animal world, a man and his economic activity join in one mutual relation whole, distinguishing the landscape from remaining areas”. KONDRACKI and RICHLING (1983) define the landscape as part the epigeosphere (the external surface of the earth), which makes up special geocomplex having a peculiar structure and internal relationships. CYMERMAN et al. (1992) perceive two aspects of content in that definition, i.e. an internal one, which decides about the quality of the landscape space and an external one manifesting itself through the landscape influence on our consciousness, impressions and personality. The above-mentioned authors also emphasize that a contemporary formation of the landscape should be carried out, taking into consideration its utilization or perception, understood as a rational and planned influence of a human being or larger social groups on chosen features as well as natural and socio-economical elements. It means about optimal utilization of the aesthetical and economic values of the landscape, and its spatial development.

WOLSKI (2002) distinguishes five main meanings of that term:  
- the landscape as a general term, (according to Perelman 1971, the

landscape in natural sciences is such a term, as in different fields: chemical element, a plant);

- the landscape as a term used to name a definite fragment of the surface of the earth;
- the landscape as a term defining the physiognomy of the surface of the earth;
- the landscape as a term defining subjective mapping of geocomplex;
- the landscape as a term defining the system (formation) of a geographical environment elements.

### **The landscape ecology**

As HOBBS (1997) and ŹARSKA (2002) state the landscape ecology has been intensely developed in last decades. That term was introduced by Troll in 1933 to determine connections between biocoenoses and environmental conditions in definite fragments of the landscape (RICHLING and SOLON 1998; WOLSKI 2002). Troll was a precursor of the landscape ecology as a separate research species, which combines the disciplines of geography and biology. He defined the landscape as a spatial unit including geo-, bio-, and antroposphere, but does not give it any dimension. Therefore, appearing later on, "ecological" definitions of the landscape that testify about its whole presentation (HOBBS 1997; RICHLING and SOLON 1998).

ZONNENVELD (1990) (based on RICHLING and SOLON 1998) defines the landscape, as „the spatial and material dimension of the earth reality – a complex system consisting of sculpture forms and water, fauna and soils, rocks and atmosphere”.

RYSZKOWSKI (1992) and WOLSKI (2002) emphasize the importance of a new field in research development on the landscape and show on a broad and practical utilization of research results, especially concerning planning and spatial development.

Second trend of last years, as is shown by ŹARSKA (2002) is the treatment of the landscape as the synthesis of natural and cultural environment. The author adds that such understanding is the most suitable as regards the actions aimed at maintenance and shaping the landscape. According to BOGDANOWSKI (1983) the landscape “that is just the physiognomy of environment, a form which results from the content comprised in the wealth as natural one as well as cultural one in a given area. And so, the relationship between us and the landscape follows at first through the surrounding perception”. WOLSKI (2002) emphasizes that „... everything what exists in lithosphere: mountains, plains, seas, lakes, air,

water, plants, animals and a person as the biological, social and managing human being, and creating culture, fields, buildings, transport, all that in the whole and in a mutual connection it creates the landscape". In such meaning the landscape is the term which just makes up in our consciousness. BOGDANOWSKI (1992) perceives the landscape as „ ...the physiognomy of the surface of the earth, being elements synthesis of nature and the activity of a man". It is a classical presentation which gave foundations to further considerations carried out in the areas of interests of Polish landscape architects.

BOGDANOWSKI (1992) and MEEKES (1995) hold a view that three kinds of the landscape in our times are distinguished:

- the primeval landscape where did not happen any visible cultural transformations but dominate natural factors and natural order e.g. the landscape of the Tatra mountain ranges or forests with a wilderness character e.g. the Białowieża forest;

- the natural landscape, where are already visible influences of a man activity, but without actions permanently transforming it e.g. the landscape of riparian forests;

- the landscape called a cultural one, which gets its form as a result of adaptive actions and suitably to changes it can have different variants.

Next, these kinds manifest themselves in the form of harmoniousness, where the full compatibility of contributing elements, disharmony where the various degree of contradiction or disturbances is perceived, until at last the devastation, which is the result of conducting or already done destroying actions. The categories following in succession introduce the complexity and the increase of problems which require well-thought out interference of a man that in turn is to give a desirable effect as a full harmony of the landscape (BOGDANOWSKI 1983, 1992). In order to get that what is affirmed by CYMERMAN et al. (1992), OLACZEK (1998) and DUBEL (2001), it should aim to optimal utilization and development resources as well as the landscape values development of individual areas that is shaping the landscape.

### **Shaping the landscape**

CYMERMAN et al. (1992) place a great emphasis on shaping the landscape as the activity, which is holds with the thought about its utilization or reception and they understand as a rational and planned influence of a man or larger social groups on chosen features and natural and socio - economical elements. The aim is an optimal utilization of aesthetical and economic values of the landscape, and its spatial

development to achieve still higher values for present and future generations.

ANDRZEJEWSKI (1992) also mentions about the optimization of the landscape and shows on the appropriate determination of its size and quality of individual components, and on their appropriate distribution in order right relations among them could occur. It is also confirmed by DUBEL (2001) who simultaneously adds that a proper running spatial development is a tool to achieve that aim.

OLACZEK (1998) exhibits the duty of the landscape protection lying with every citizen, as well as with all ranking of power in our country. Then he reminds that there are suitable legal regulations recognising the landscape for a special good having universal character, the good which should protect. The author refers the fact of existence as much as three forms of the landscape protection. MEEKES (1995), ROOKWOOD (1995), MICHAŁOWSKI (2001) and WALDHARDT (2003) emphasize the preservation role of a complex and rich structure of the landscape for maintenance and an effective protection of live nature resources. Therefore the landscape makes up the good, an incomparable value and all of us are responsible for its preservation and development (BOGDANOWSKI 1992).

Conscious and well-thought out the landscape shaping has long traditions (ANDRZEJEWSKI 1983; CYMERMAN et al. 1992) and dates back to England in the 17th century, where the landscape was the subject of elite interests (BÖHMM 2000). But only the 19th and 20th centuries are acknowledged for the time of dynamic development of protection bases and shaping common space. Then, it has been appeared that the distribution way of natural and technical elements in it, and proceeding degradation processes cause the consequences for functional and aesthetical proprieties of the landscape (RYLKE 1978; ANDRZEJEWSKI 1983). In Poland, General Dezydery Chłapowski in the middle of the 19th century carried out first conscious activities concerning shaping the landscape. In the Great Poland region he started to introduce belt stand densities of inter filed areas in order to modernize and improve economic effectiveness in agricultural economy (ANDRZEJEWSKI 1983; KARG and KARLIK 1993).

RYSZKOWSKI (1992) and ŻARSKA (2002) agree that it is not able correctly to protect and shape natural environment, including the landscape, without knowledge of basic ecological laws, the principles of functioning ecosystems and impact of individual environment elements on our activity. Every fragment of the cultural landscape in its various symptoms was formed as a result long-standing transformations. The way

of its transformation passed from the primeval type through its natural until to its cultural type.

That one was shaping, in turn through numerous historical forms until today's forms (RYLKE 1978; CYMERMAN et al. 1992; VOS and MEEKES 1999). The landscape evolution is particularly visible in rural areas that constitute above 90% territory of Poland. Therefore we should accept their crucial role in the protection and shaping natural system. The rural areas, mainly agricultural and forest ones are the bases for functioning of existed and newly created protected terrains (LIRO 2001; STASIAK 2001). As emphasize RYSZKOWSKI and BAŁAZY (1991), rural areas (agricultural ones) make up “the tissue surrounding and penetrating remaining ecosystems”.

### **Agricultural activity and its influence on the landscape**

The main user of Polish ecological space, including also the landscape is agriculture. The agricultural economy affects on the quality of that area in favourable way as a result of the landscape structure variety, a restrained soil usage or favouring the protection of native wild nature elements (DEMBEK and LIRO 2001). KARG and KARLIK (1993), and KARG and RYSZKOWSKI (1996) attribute characteristic rank of the agricultural landscape, and especially its individual elements – fields, stand densities, small forests, meadows and so on - and the structure creating perfect conditions to existence and development of many animals species as well as enriching biodiversity. All these elements, as have been emphasized by RYSZKOWSKI (1992) and PANFILUK (2003), in a considerably larger degree than the activity of a man, accomplish functions that organize and arrange processes of matter cycle in ecosystems and the landscapes and moreover they favour intentions and the realization of a man in natural sphere.

The most essential part of the agricultural landscape make up the following natural elements of the environment: landform features of the surface of the earth, soil covers, water resources and their systems, climatic conditions, flora and the animal world (RYSZKOWSKI and BAŁAZY 1992). Apart from the above-mentioned elements there are anthropogenic factors i.e. those ones introduced by a man. They have an effect on many elements and features of the landscape, and first of all, on existing natural conditions including biotope and biocoenosis and its whole external image through shaping aesthetic and scenic proprieties.

BAŁAZY and RYSZKOWSKI (1992), and MLYNARCZYK and MARKS (2000) hold a view that shaping the landscapes from the point of view

of agriculture is one of many needs in introducing the spatial order on ecological bases; as also crucial significance are recognized needs of water management, health and climatic aspects and so on. Then they show that reconstruction processes of the landscape last a long time, and quickly occurring degradation processes. Therefore, it is an urgent need to work out and revise optimal principles concerning a use and shaping the landscape. The achievement of full harmony and balance in the landscape requires constant controlling its shaping processes (VOS and MEEKES 1999; von HAAREN 2002; PANFILUK 2003).

Whereas CZAJA (1999) emphasizes the role of the rural landscape and creating it diverse culture goods as extremely essential elements of the civilization heritage of Poland. These elements express bond between the past and the future.

That dimension which concerns the intergeneration bond requires its protection and development. On the other hand, the agricultural sector, however, is the serious source of pollution and multiple forms of environment degradation (DEGÓRSKA 2000; LIRO and Dembek 2001; ŻELAZO 2001). As KŁODZINSKI shows (2001), the policy of the environment protection too often concerns particularly sensitive ecological areas, while it should concern the whole agriculture, which according to RYSZKOWSKI (1996) is a dominant spatially form of soil usage generating many threats for biological and landscape variety. Therefore, it becomes necessary to develop such forms of management, which will keep a considerable abundance of organisms, limit threats or introduce new ways of actions stimulating the preservation of natural environment in intact state (RYSZKOWSKI and BAŁAZY 1991, 1996; RYSZKOWSKI 1996; ŁACHACZ 1997; DEGÓRSKA 2000; LIRO 2001; LIRO and DEMBEK 2001; WITKOWSKI 2001; ŻELAZO 2001).

RYSZKOWSKI (1996), KOZŁOWSKI (2000) and STASIAK (2001) unanimously perceive that such actions have the special significance but they will not replace traditional action methods concerning territorial forms of nature protection. Only use of all accessible methods and ways can save values and the whole of nature of a given country. ŁACHACZ (1997), and LIRO and DEMBEK (2001) show that a restrained and sustainable way of nature resources management is the most favourable to preserve biological variety in rural areas. It causes the preservation of such elements of the natural environment as: semi natural multi species meadows, inter fields stand densities, small ponds, baulks, bogs and so on. Simultaneously the above-mentioned authors add that the most valuable among them should be provided with a legal protection as legally protected areas. ŻELAZO (2001) adds that environment state in rural areas - unurbanized

ones and their maintenance and using has a crucial significance for the realization of sustainable development strategy.

### **Forests and stand densities as the landscape elements**

Woodland areas are territorially and functionally connected with rural areas (ŻELAZO 2001). Forests play fundamental role in the preservation of natural processes continuity at every area. The forests are essential element of the landscape and functional factor making the landscape. The forest as an integral and renewable natural resource fulfils essential functions and satisfies a rich range of different human needs (ŁONKIEWICZ 1992; GRADZIUK 2000).

MARSZALEK (2001) and SYMONIDES (2003) place emphasis on ecological functions of forests and emphasize their role in water system stabilization, improvement of atmospheric air quality, the counteraction of soil erosion as well as favour protection and preservation of biological variety. Forests together with stand densities make up a natural structure being a habitat of majority of wild living flora and fauna representatives. About 2/3 of general taxones number existing in Poland, there are forest species or connected with the forest. There are 38 tree species that form forests including 31 broadleaved trees and 7 coniferous trees.

Among land vertebrates 43% of them make up forest species and further 17% there are bog terrains and peatbog species, quite often involved forest economy (RYKOWSKI 2003). MARSZALEK (2001) mentions about hygienic, aesthetical and cultural values of a forest. This author advances the thesis the forests inspire a spiritual development of a man as well as favour keeping mental and physical health of society. Next CZERWIŃSKI (1992), SZUJECKI (1995, 2001) and GRADZIUK (2000) emphasize a productive function of a forest and recognise that it is still dominant, because a forest is a special element of nature which thanks to its considerable productive potential and its reproduction abilities satisfies many needs of contemporary civilization.

TRAMPLER et al. (1990) emphasizes a differentiated role of forests. It depends on afforestation rate and a forest complex size and so for example in areas with few afforestation rate even small forests located among fields play essential soil protecting role, in turn large and cluster forest complex well fulfil water protection tasks.

As MARSZALEK (2001) states, at present mankind needs to own further existence, correctly developed forests and that can only happen, when people devote indispensable part of their time and effort to forests. The same author announces that the demand for environment making functions



of forests, especially these ones connected with protection and shaping the natural environment of a man, increase more quickly at present than the demand for wood.

The stand densities make up a significant element of the landscape, both modifying physical proprieties of every area as well as processes important for functioning the landscape (DĄBROWSKA-PROT 1987). The wildlife conservation law defines stand densities as “trees and bushes in the boundary of a road lane, single trees or bushes or their clusters not being the forest as defined by article 3 of the Forests Act, together with the terrain where the forests exist and remaining flora elements of that terrain, fulfilling protective, productive or socio-cultural aims”. According to KARG and KARLIK (1993) the stand densities are one of principal agricultural landscape elements. They are created by remains of natural forests complex, spontaneously coming into existence bushes and stand densities along ditches, baulks and so on and, purposeful planting of various spatial forms and species structure fulfilling a lot of functions, e.g. roadside stand densities. Particular role play inter fields stand densities that create groups of trees and bushes growing in fields, meadows and pastures.

Every stand density fulfils more than one function in the environment, and its location, forms, species composition and building determine in the considerable measure protective effects. Among the most important functions are mentioned the following – shaping a local climate, soil protection against water erosion and soil blowing, protection of biological variety and fulfilling ecological corridors function as well as environmental islands. At the same time every stand density enlarges water retention of areas, prevents water pollution, improves recreation and aesthetic values of the natural environment and increases wood production (DĄBROWSKA-PROT 1987; KARG and KARLIK 1993).

The specific function have riverside stand densities. As DANIELEWICZ (1993) states, willow thick brushwood growing on embankments near river channel prevent erosion caused through flowing water, strengthen banks, while some species of willows absorb toxic contaminations of river water. In turn, natural retention which is characteristic for marshy meadows reduces the states of the spring melt and eases the results of summer drought.

According to DUBEL (2002), thanks to various functions and tasks, stand densities also can have a positive effect on the agricultural production contributing to the growth of crops. *The national programme...*(2003) emphasises a role of stand densities and shows, that there, where afforestation is not possible, the stand densities as the substitute of forests

are worthy to disseminate, that is the factor equivalent with a formative afforestations, enriching and protecting the natural space. As ŹELAZO recognises (2001), stand densities institution and their appropriate conservation belong to desirable actions in favour of protection and shaping environment in rural areas. CHMIELEWSKI (2003) adds that introducing many species stand densities is the instrument, which prevents negative influence of agricultural economy on the biological and landscape diversity variety.

### **The protection of nature and the landscape**

Actions in favour of protection and shaping nature in rural areas require diverse undertakings (RYSZKOWSKI 1996; CZAJA 1999; DEGÓRSKA 2000; LIRO 2001; WITKOWSKI 2001; ŹELAZO 2001). The actions of technical, investment as well as organizational, administrative and educational nature are necessary (CZAJA 1999; DUBEL 2001; ŹELAZO 2001). The above-mentioned authors are unanimous, emphasizing the rank of ecological education as the instrument which can contribute in the prominent degree to introducing principles of sustainable development.

It is important to carry out needs in the range of ecological consciousness not only at all levels of education activity, but also through various local initiatives. Only deep changes in the mentality (especially adult people), and building the civil society, which possesses wide knowledge about surrounding us the world can guarantee effective prevention of ecosystems as a whole (CZAJA 1999; DEGÓRSKA 2000; DUBEL 2001; KISTOWSKI 2001; ŹELAZO 2001).

In our times, it considers itself that it is not enough to content itself with showing objects should be preserved. It is essential, at least, a general recognition of all elements of local nature. For particularly important is considered the diagnosis of places that play essential role in the landscape (PAWLACZYK and JERMACZEK 2000). Such understood natural stocktaking should be the element of the preparation to any actions in the range of spatial planning (WRONA, TRUSZKOWSKI and DĄBROWSKA 1997a, b; PAWLACZYK and JERMACZEK 2000), and as DUBEL shows (2001), the spatial planning makes up a basic tool of the protection and the development of the natural environment, it formulates the range, time and the way of using the space.

Every decision relating to spatial economy - the authoress adds - has its repercussions in the environment, and every change in it causes transformations in spatial arrangements.

## **Managing space and landscape**

There is the natural environment and its rational development underlying the bases of spatial planning according to principles of sustainable and durable development. Special role in that range falls to the community governments that thanks to local development plans make decision leading to an area management and transformations of every community (KORZENIAK 2001). These plans constituting local law are guarantors of a spatial order, what as states DUBEL (2001) is understood harmony, functionality and logic, and the legibility of a given territory as well as its aesthetical values and such management which will keep the harmony with nature. Therefore, community authorities as well its citizens bear responsibility for shaping direct neighbourhood, and state of natural resources and the landscape. The Planning and Spatial Development Act (Law Gazette of 2003 no. 80; item 717) forces to work out the study of conditions and spatial development trends from the community authorities. That study takes into consideration, among others environment state and requirements of its keeping, particularly in the aspect of nature conservation and the cultural landscape. According to DUBEL (2001) such study makes up so rational tool of spatial policy realization at every community. The thorough knowledge of natural sphere should be an essential element of that document used in preparing strategic studies (strategies) related to further development. As DUBEL (2001), KORZENIAK (2001) and SZULCZEWSKA (2001) state, the suitable regulation legitimized through specific legal solutions, can contribute to making rational use of space including the preservation of valuable ecological systems and natural connections. PANFILUK (2003) adds that the appropriate carrying out spatial policy is one of crucial elements of durable and sustainable development implementation, particularly at local level. It contributes to improvement of the environment quality and preservation of biodiversity.

DUBEL (1999, 2001) represents a view that natural stocktaking is a basic and absolutely necessary material in the realization of the spatial policy, ecological development principles and effective actions to improve environment state and the influence on environmental consciousness of the local community. In spite of the fact that near 1/3 territory of Poland is included by legal area protection, PAWLACZYK and JERMACEK (2000) recognise the realization of natural stocktaking of terrains as an extremely urgent there, where have been created or is proposed to create the landscape parks and areas of the protected landscape.

JANKOWSKI (2001) places emphasis on the co-operation of interested sides, i.e. foresters, local governments and associations, and people

interested in environment protection issues and so on, stocktaking and nature valorisation. Next Kistowski (2001) adds that unequal state of natural space value recognition and its thorough evaluation belong to the most important and still current problems concerning the spherical of the conservation of nature.

The problems should solve as quickly as possible applying as far as possible simple and uniform stocktaking methods and natural valorisation.

**The main forms of actions in the landscape economy:**

- using the landscape - should be rational i.e. the landscape as such is treated as a resource, which in the longer period of time can be exhausted;
- the landscape protection - has the task of keeping, possibly unchanged current state of the landscape. It will be only concerned areas of high natural and the landscape values;
- the conservation of the landscape - first of all, is to prevent unfavourable changes and to remove damages;
- shaping the landscape – is to change the landscape, to harmonize natural and anthropogenic elements.

**To basic forms of the landscape economy belong:**

- the landscape policy, which establishes aims, and shaping and management means in definite external conditions;
- spatial planning determining spatial solutions of the landscape policy;
- management, which transfers solutions of the policy and planning in the realization sphere;
- active forms of the landscape economy which realize concrete tasks shaping the landscape (e.g. agricultural and installation works).

Management of the landscape means, on the one hand, the management of individual environment resources (soil, water, the lie of the land, climate, fauna and flora), and treating the landscape as separate, requiring individual approach – the environment resource.

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