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## EDITORIAL

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## HUMAN AND NATURE: BETWEEN DESTRUCTION AND CREATION

**Abstract:** The problem of interaction between man and nature throughout history is, relatively, rarely addressed by classical historiography. The session entitled **Man and Nature: Between destruction and creation**, organized and chaired by Prof. Tadeusz Janicki (Faculty of History, UAM, Poznań, Poland) and Prof. Dariusz J. Gwiazdowicz (Department of Forest Protection, Poznań University of Life Sciences, Poland) on 24 August 2022 as part of the XXIII International Congress of Historical Sciences Poznań 2022, was an attempt to change this tendency and broaden the existing research perspective. The papers delivered during the occasion were the starting point for the preparation of a special issue of the journal *Studia Historiae Oeconomicae* (SHO), the primary purpose of which is interdisciplinary reflection by specialists from various scientific disciplines on the problem of destruction of natural landscapes and creation of cultural landscapes, along with other issues concerning the interaction between humans and the natural environment from prehistoric times to the present.

This special issue of SHO consists of seven articles on diverse topics, analysing human interactions with nature through different historical periods, meanwhile taking into account their economic, civil, social and climatic conditions.

The result is a multifaceted mosaic of topics that constitutes an original and interdisciplinary analysis of man's relationship with nature, which may be a source of inspiration for readers and perhaps further research in this field.

**Keywords:** environment, nature, civilization, history, man

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At the threshold of the 21st century the awareness of an interdependence between mankind and the natural environment is prevalent. However, conventional historiography still focuses on interpersonal relations between people and only partly admits the fact that any human activity takes place in natural surroundings, which over the centuries posed both a threat and a foundation for the development of civilisation. For more than 50 years, environmental history has attempted to fill this gap in historical research, concentrating on interactions between the development of civilisation and the natural environment.

Our relations with nature have changed over the centuries with regard to economy, society and culture. On the one hand, they have consisted in the exploitation of natural resources and in our striving for liberation from the limitations imposed by nature, while on the other hand, sacralisation of nature has also been evident, involving attribution of supernatural powers and mystic qualities to animals, trees and mountains. Our interaction with nature has played a vital role in economy, but it has also served as the determining factor for our thinking, emotions, behaviour and beliefs, affecting the social and state structures.

Widespread exploitation of timber, deforestation to clear land for agriculture, hunting of numerous animal species and extraction of stone, metal ores and fuels constituted the basis of human economic activity and the development of civilisation. This does not mean, however, that the interaction between humans and nature over the centuries was unidirectional. Nature has not been merely an object of human activity and exploitation, but also an active factor affecting the history of civilisation. Differences in the intensity of changes caused by human activity have been influenced not only by the progress of civilisation (development of tools and technology), but also by the geographical region, which determined the character of natural conditions. This is so because nature creates a number of inequalities as to the degree of insolation, temperature, rainfall level, landform features, type of soil and vegetation, thus naturally designating areas, which are to a greater or lesser extent suitable for human settlement.

Furthermore, the historical paradox is that in the second half of the 20th century, at a moment when it seemed that we as humans reached a high level of control over nature, it became clear that we had reached the point where any further unsustainable and unrestrained exploitation of natural resources may result in the decline of the entire civilisation.

In this context, a number of questions and research theses arise regarding e.g. destruction of the natural landscape and creation of the cultural

landscape both in the past as a precondition for the development of civilisation and today's absence of opposition between the natural and the cultural landscape, as testified by contemporary forms of nature protection including also cultural values. Other research questions concern such issues as e.g. the interactions between humans and nature, depending on the time, place and type of civilisation, the dominant economic system (agricultural, industrial and post-industrial economy), the level of knowledge and social consciousness, natural processes and phenomena (climate warming and cooling cycles).

In search for answers to the above research questions, it was decided to give authors – specialists in various fields of science (e.g. historians and naturalists) an opportunity to express opinions, thus a platform for discussion has been provided, which is a special issue of the journal *Studia Historiae Oeconomicae*. This is a step towards interdisciplinary research, indicating the potential for holistic comparative analyses between the destruction of the natural landscape and the creation of the cultural landscape.

This special issue comprises six papers on a variety of subjects, covering diverse historical periods and presenting different opinions and attitudes of the authors. This has produced a multifaceted mosaic of subjects providing an original analysis of the relationships between humans and nature. Such an interdisciplinary approach may be a source of inspiration for readers and initiate a lively discussion.

Systems of interactions between the development of human civilisation and changes in the forest environment date back to several millennia, as analysed by Küster (2024). In the opinion of that author, changes in the forest environment have been greatly affected by the manner of its use, which has been evolving over thousands of years. For example, in prehistoric times settlements were established only to be abandoned after several decades and replaced by secondary succession. In later historical periods exploitation of forests was connected with the need to harvest timber, e.g. as building material or fuel. Additionally, changes in weather patterns have determined a specific species composition of stands, with some tree species retreating and others increasing their ranges. Pollen analyses provide a useful tool to identify these habitat changes or the character of plant communities in a given historical period. Results of these analyses may provide grounds for research hypotheses and suggest potential causes for changes in the forest environment, among other things. That author focused on the spread of the European beech (*Fagus sylvatica*), which pol-

len grains were recorded in many Central European pollen diagrams in the same layers, in which the first cereal pollen grains were also found. This indicates that the expansion of beech forests began at the time when cereals started to be grown. Whether beech was favoured by humans or suppressed by humans, depended on the stage in the development of civilisation, as shown by pollen curves. Scarce cereal pollen grains deposited in peatlands in prehistoric times reflect the cultivation of plants at that time. The management system differed completely from that adopted in later historical periods. Forests were cleared to harvest timber e.g. for fuel and to obtain land for farming. Prehistoric settlements and their fields existed only for several decades and then were abandoned, which promoted secondary succession. First shrub forms appeared, such as e.g. birches, willows or poplars. After several decades oaks returned along with beeches, which in turn replaced oaks with time. This was connected with the fact that beeches could grow in lower layers of oak stands, whereas oaks were not able to grow under the canopy of beech trees. As a consequence, starting from circa 5 000 B.C. beech was spreading north from the area of southern Europe, reaching southern regions of the British Isles or the Scandinavian Peninsula. Expansion of this tree species was completed approximately at the same time in various parts of Europe. Around the year 1000 the boundaries of the range of European beech stabilised and did not change markedly during the last 1000 years. This was caused by the evident change in the spatial management strategy, since in historic times it was no longer a common practice to abandon and move settlements and fields. Generally settlement patterns stabilised and secondary succession ceased, thus preventing the expansion of beech. In historic times land use increased markedly and trees were cut down on a larger scale as a result of greatly increased demand for fuel wood. This in turn led to the reduction of areas overgrown by beech trees.

Another research problem was discussed in their paper by Iłski and Kotłowska (2024), who analysed opinions of Plato on degradation of the soil environment, presented by that outstanding philosopher in his work *Critias*. In the opinion of Plato appropriate actions taken by humans may mitigate negative effects of a natural disaster, e.g. soil erosion caused by rainfall, while inappropriate actions may exacerbate or even cause such a disaster. As an example he mentioned excessive clearing of forests and lack of reforestation, leading to soil erosion, since by preventing water absorption it accelerated degradation processes. For this reason it is not surprising that when describing the ideal beauty of certain regions of Greece



Plato mentioned plating of trees next to water bodies; while this postulate was not novel, we may see it as laying grounds for rational forest management. In ancient times the Greeks contributed greatly to the development of geographical sciences, since they formulated both theoretical and descriptive foundations of astronomy, physical geography and ethnography (in the context of the dependence of culture on natural conditions). In contrast, geology as a branch of science was not properly defined. Obviously, the primary reason for such a situation in relation to the other branches of geographical sciences was connected with the geological time scale, unimaginable for the ancients. In the case of changes in relief only events rapidly changing the surroundings (volcanic eruptions, earthquakes, floods) could be described and interpreted. In this context the work of Plato clearly indicates that he showed a certain ecological awareness. When seeing degradation of the natural environment he was able to identify its causes and indicate countermeasures, rational also from our point of view, while at the same applying scientific terminology. He associated the welfare of nature with the quality of life for humans as social creatures. However, it also needs to be emphasised that - similarly to a vast majority of ancient thinkers, he saw the underlying cause for the crisis as connected with the morality of individual people rather than systemic changes.

In turn, Benincasa (2024) focused on fowling (*aucupium*) in ancient Rome. That author showed that Romans had mixed opinions on *aucupium*. On the one hand, it was an activity which was scorned and considered to be a waste of time, which could have been used by managers of rural estates in a more sensible and effective manner. In contrast to ancient Greeks, Romans were not enthusiasts of hunting and practiced it only when necessary, to protect crops and fields, or to obtain food. Only after around 150 B.C., along with the popularisation of the Greek culture and fashion to imitate the Hellenistic lifestyle by the Roman elites the attitude changed, inspired by the Hellenistic models and Eastern culture. Since that time hunting as a form of entertainment started to be practiced by the Roman upper classes. While hunting large game could be considered a type of activity bringing respect to the hunter, being evidence to his physical fitness, strength and courage, *aucupium*, not being related to the risk of injury and not requiring an equal amount of courage as in the case of hunting a bear or a boar, was not deemed worthy of respect. Nevertheless, in the period of the Roman empire it was fowling scenes that became frequent motifs of various artistic representations, paintings, frescoes and mosaics, while the fowler (*auceps*) catching wild birds was an iconographic topos and a typi-

cal element of the rural landscape. This in turn indicates that the role and importance of fowling was no longer negligible. The most common technique adopted by fowlers, making it possible to capture a live bird sitting on a tree branch, was to use a reed covered with glue. This hunting method was practiced typically in the autumn months (October, November), i.e. at the time when birds were prepared for migration and were the fattest. Fowlers also set traps and nets, in which live birds were caught. Other birds were also used in fowling, in order to attract other representatives of their species with their colourful plumage or songs. The *auceps* himself also used various instruments to imitate sounds made by birds in order to lure birds to a specific location and then catch them with a glue-covered reed. However, it is a general opinion that falconry was not practiced in the Roman world until late antiquity, although Martial (Marcus Valerius Martialis), a Roman poet publishing his *Epigrams* in the last two decades of the 1 century AD, mentioned a falcon being a helper to the fowler in capturing fowl.

Analysis of the source material from that period indicates that the main problem was to reconcile the freedom of hunting with the growing economic role of fowl breeding. One of the methods to protect owners of fowl farms with respect to third parties was to acknowledge that while fowling itself may not be prohibited, the land owner may prohibit fowlers from entering his landed property and as a result to a considerable extent hinder the practice of *aucupium*.

A completely different subject was presented by Koike and Koike (2024), who focused on the history of forest aesthetics in Japan. While it was initiated by Heinrich von Salisch in 1885 in Postel (currently Postolin, the Dolnośląskie province, Poland), in the early 1900s it was introduced also at Imperial Universities of Japan, in Tokyo, Hokkaido and Kyoto. Unfortunately, to the regret of the authors presently lectures in forest aesthetics are given only at the Hokkaido University in Sapporo. The essence of forest aesthetics was to conduct economic activity in the forest environment in a manner preventing the loss of aesthetic value of nature. At the time when the concept for forest aesthetics was first introduced, no mention of ecosystems or ecosystem services could be found in literature and ecology as a branch of science was in its infancy. Today forest aesthetics is frequently considered to be the foundation for sustainable forestry and it is promoted as a means to ensure the undisturbed presence of forests, making them more resilient to external factors, such as e.g. mass emergence of insect pests or damage caused by high winds. However, it needs

to be stated here that the concept of forest aesthetics popularised in Japan and based on human activity, for example planting specific tree species and creating a desirable stand structure, differs from the present-day approach adopted in Europe. The opinion predominantly held in European countries states that nature is beautiful in itself and there is no need to introduce human activity to emphasise it, as it is enough just to learn how to perceive and appreciate this beauty.

The issue of the positive impact of nature on human health, based on the example of health resorts created in the 19th century in western Galicia, was presented by Z. Hojka (2024). The healing values of a good climate and mineral waters were known already in ancient times. In the following centuries, in Europe, including in Poland, the healing properties of water were used, but until the end of the Middle Ages, cases of this type of treatment were rare and usually reserved for the social elite.

In Poland, there has been a slightly greater interest in these forms of treatment since the 16th century, when mineral waters were used to treat rheumatism, gout, inflammation of the reproductive organs in women and even syphilis. The treatment consisted of bathing and drinking water. Further development of hydrotherapy took place in the 17th and 18th centuries, and especially in the 19th century, which brought the development of scientific research on balneology and the popularization of related therapeutic methods. Due to natural reasons, Western Galicia was the area predestined for establishing health resorts. There were mineral waters, a favourable microclimate and a mountain natural environment attractive for landscape reasons, especially in the south of the region. However, at the turn of the 18th and 19th centuries, foreign health resorts were particularly popular among Polish elites (especially the Czech Karlsbad, currently Karlovy Vary), which were easier to access for transport reasons, guaranteed a higher standard of services and employed educated doctors.

The situation in favor of Galician health resorts began to change only in the second half of the 19th century, when doctors began to notice the advantages of native mineral waters and the number and quality of treatments offered increased. The regulation of legal issues related to their operation, the expansion of the road and railway network and the improvement of accommodation conditions and spa infrastructure also had a positive impact on the development of health resorts. As a result, at the turn of the 19th and 20th centuries, the number of spa visitors was growing rapidly, and the leading health resorts from this period included: Krynica, Szczawnica, Krościenko, Żegiestów, Zakopane, Wysowa, Rabka,

Swoszowice and Krzeszowice. They treated, among others: tuberculosis, asthma, diseases of the digestive tract, urinary tract and circulatory system, neurosis, anemia, rheumatism and degenerative diseases of the joints and spine, as well as heart and skin diseases. Spas were usually private enterprises that used the healing properties of water for profit. However, with the spread of spa treatment, social awareness of the perception of nature also changed, and fashionable resorts became places of social and artistic life, the best example of which is Zakopane. As a result, human interaction with selected elements of nature, aimed at improving his health, also had a social, economic and cultural dimension.

The next papers concern nature-related issues in Poland. Daszkiewicz (2024) presented reintroduction of animal species in Poland in the years 1919–1939. It was of great importance, since after a period of wars and ruthless exploitation of forest resources by the occupying forces as well as famine affecting the local populations and mass-scale poaching, many animal species in Poland became extinct. The loss of the largest terrestrial mammal of Europe, i.e. the European bison (*Bos bonasus*), was particularly painful. An initiative to reintroduce this species was presented at the congress in Paris in 1923 by Prof. Jan Sztolcman. The first step in efforts to save the European bison consisted in the inventory of the individuals, which survived in zoological gardens and game reserves. Apart from the European bison from Białowieża, hybrids with the European bison from the Caucasus, the American bison and domestic cattle were also found. Thus a question arose whether and how to use these hybrids in efforts to save the species. Lively discussions led to an obvious conclusion – the aim was to restore a “genetically pure” Białowieża population. Another important issue was connected with ownership. Most European bison were found in private hands, thus releasing them to an international organisation or their sale depended each time on the decision of their owners. Nevertheless, all the problems were overcome and in September 1929 the first individuals were placed in the reserve in the Białowieża Forest. The reintroduction programme led to an international success of the Polish nature conservation policy.

Another species which needs to be mentioned here was the brown bear (*Ursus arctos*), which became extinct in the Białowieża Forest in the 19th century, having been exterminated as a “pest” species by the Tsarist administration. The programme to reintroduce this species was the first example worldwide for reintroduction of a large predator. The release of bears into the wild had been preceded by long-term preparations span-

ning many years, as well as a discussion concerning the origin of individual animals, their selection and reintroduction methods. In 1938 the Polish Hunting Association released several 18-month old individuals in the Białowieża Forest and a cage with a pair of adults was placed. After 1945 a female with two cubs was being met in the Forest. In 1946 two bears set up their lairs in the Białowieża National Park, thus the reintroduction of bears was deemed as a tremendous success on the global scale. Unfortunately, no bears have been spotted in the Białowieża Forest after 1947.

Professor Tadeusz Vetulani in his works stated that the Białowieża Forest was the last location inhabited by a wild population of forest tarpans (*Equus gmelini*). For this reason in 1933 at a meeting of the Polish section of the Society for the Protection of the European Bison that scientist proposed introducing Polish koniks from the Biłgoraj region, since those ponies are most similar to the tarpan, to a reserve established in the Białowieża Forest. In 1936 the first koniks were brought to the Forest and their breeding programme was initiated. Unfortunately, during WWII the occupiers took the entire herd of the Polish koniks to Germany. Despite a special restitution mission Prof. Vetulani was not able to recover any of the Białowieża koniks. As shown by the examples above, some reintroduction programmes for certain species in the Białowieża Forest were successful (the European bison, the beaver), while others failed (the brown bear, the tarpan). Still those examples show that following the period of the Partitions after Poland regained its independence over 100 years ago issues related to nature conservation and fight to restore certain species proved to be of great importance.

The history of Polish countryside and agriculture after WWII has been discussed in numerous scientific publications. However, the interdependence between efficiency of agricultural production and its impact on the natural environment has generally been neglected or marginalised. It was precisely this issue which was focused on by Janicki (2024), who argued that food is produced using natural resources such as soil, water or air. As a consequence, the activity of farmers transforms the landscape and affects biodiversity, among other things. For this reason this problem may be analysed both in the context of the economic policy and ecological relationships, which vary depending on time and location. That author limited his analysis to the timeframe covering the period from the end of WWII (1945) up to Poland's accession to the European Union (2004). The aim of the agricultural policy in post-war Poland was to feed the rapidly growing population. For this reason the communists, who in the

years 1944–1947 won absolute power in Poland, during the entire period of their rule strived to increase agricultural production, which was considered a necessary precondition for the legitimisation of their rule and maintenance of the social contract. They intended to attain their objectives through intensification of agricultural production based on chemicalisation of agriculture (application of artificial fertilisers and pesticides), breeding of new plant cultivars and development of new breeds of livestock, as well as mechanisation reducing labour inputs. This concept, referred to as industrialisation of agricultural production, combined with collectivisation of farms was to promote the establishment of large cooperatives and state-owned farms, producing food on a mass scale thanks to the application of new agritechnical solutions. Communists were not fully successful in realising the above scenario, since they had to abandon the concept of collectivisation in agriculture; however, their paradigm related to increasing agricultural production through intensification of agricultural production was considered binding until the end of the communist rule in 1989. In that period nature was treated as “a free good” available in unlimited amounts. The fact that intensive agricultural production may pose a threat to natural resources, and consequently to the health of both the rural populations and food consumers was considered far from obvious. Following the fall of the socialist economy in Poland, starting from 1990 the use of artificial fertilisers and chemical pesticides was gradually decreasing, which combined with intensive efforts to improve water and air quality has led to a marked improvement of the natural environment quality. Particularly beneficial effects were connected with the reduced intensity or ceased use of meadows in river valleys, as well as purposeful afforestation and actions aiming at diversification of landscape in large farms with such forms as meadows, ponds and tree plantings. Unfortunately, at the same time in some agricultural areas a gradual simplification of crop rotation and increasing monoculture cereal cultivation have been observed, which has led to the growing application of pesticides and reduced humus content in the soil. In the opinion of Janicki (2024), the paradigm of agricultural production growth, dominant over most of the analysed period, after 1990 was replaced by the paradigm of efficiency and profitability. However, in both cases the aims were attained through intensification of agricultural production, which resulted in increased plant and animal production, while at the same time reducing biodiversity (leading to the retreat of most invertebrate and bird species), as well as deterioration of rural landscape value.

*Homo sapiens* is an exceptional species, unique in its capacity of abstract thinking. This distinguishes us from all other species inhabiting our planet. We frequently repeat after Descartes *Cogito, ergo sum* (I think, therefore I am). This capacity to think and understand cause and effect relationships made it possible for humans to leave the dark caves they had been inhabiting and enter the path leading to the development of civilisation. This has been a long journey, during which we have learned how to cultivate plants and breed animals, leading to the development of agriculture. However, since the times of Cicero (106–43 B.C.) *Cultus agri* (agriculture) has gained a new meaning and the term culture started to refer also to the entire spiritual and material heritage of mankind, created by humans over time.

For millennia humans have used natural resources and created their world, imposing their own rules and laws. As a result the landscape has been transformed from the natural and pristine, to what was considered friendly to humans. Huge urban agglomerations have developed, inhabited by dozens of millions of people. They provide us with everything we need – safety, healthcare, quality food, jobs, entertainment, etc. As a result two realities seem to coexist – one familiar and comprehensible to humans, and the other, increasingly alien and incongruent, i.e. nature.

The development of culture has led to the development of sensitivity and nowadays the laws of nature are perceived by us as extremely brutal. Nature, in which fear, pain, suffering, disease, death provide a “dog eat dog” reality, is incomprehensible and unacceptable to us. Thus ideas have been popularised, related to interference into the natural world and imposition of human rules, e.g. providing animals living in the natural environment with rights analogous to human rights. This indicates that the relationships between humans and nature, or nature and culture, are extremely complex and difficult for us to fully understand.

Nevertheless, it is obvious that the relationships between nature and culture are crucial for the life and development of *Homo sapiens*. Thus, there is a pressing need to search for links or bridges between the human world and the world of nature in order to develop the cultural sphere while at the same time caring for the natural environment. The sense of responsibility for the nature value, which we need to promote considering the future generations, has to be nurtured and considered a priority in the face of consumer expectations, etc.

**Dariusz J. Gwiazdowicz** is a professor working at the University of Life Sciences in Poznań. One of his research trends is exploring relationships identify and gain insight into the complex dependencies, which have developed over centuries, between civilisation progress (the cultural landscape) and natural changes (the natural landscape). In this context it is crucial to perform a historical analysis of economic mechanisms affecting the natural environment, while at the same time acknowledging the inspiring and cultural role of nature. He conducted teaching classes or research projects in almost 30 institutions on all continents. He is the author of over 500 scientific and popular science publications that have appeared in over 100 journals in 25 countries, of which 130 are works from the Journal Citation Reports list. Additionally, he is the author of several scientific, popular science, biographical, textbooks and one travel book.

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