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The case of Polish border parks

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- 1 Areas along national borders can be peripheral from a socio-economic standpoint, but may contain valuable natural landscapes, bearing more limited signs of human influence. This article therefore examines the concept of the “eco-frontier” (Guyot 2011) in borderlands, focusing on the manner in which protected areas, especially National Parks, were established and have been operated to preserve certain aspects of the frontier dynamics of borderlands. Analysed to that end is the ecological territorial domination exercised by contemporary eco-conquerors who activate the conservation potential of the areas in question with a view to the emergence of new kinds of borderland being stimulated.
- 2 The objective here is twofold: on the one hand, to illustrate the role of nature in borderlands, and on the other to highlight the interactions between national mobile border functions and the development of eco-frontiers in mountainous areas.
- 3 Specifically, the research described here was conducted in Poland’s mountainous borderlands, notably those along the Polish-Slovak border, which as considered examples of ecological frontiers in mountainous areas of the European Union located within Central/Eastern Europe. Polish mountain borders mostly run along the ridges of mountain ranges, in this way splitting areas of a generally uniform nature. The areas in question have mostly been used in livestock farming, forestry and tourism. In some areas characterized by particularly attractive landscapes (such as the Tatra and Pieniny Mountains), the advent of tourism in fact dates back to the 19th century. Later, strong anthropopressure, including heavy tourist traffic, spurred efforts to provide legal protection of nature in order to ensure preservation for future generations. In this context, the areas adjacent to the borders which long isolated them from the outside world are now often places which concentrate conservation efforts, with a quest to ensure the legal protection of wilderness, sometimes on both sides of a border.

- 4 Our use of the paradigm of the “eco-frontier” comes from the work of S. Guyot (2011), who sought to qualify what he defined as a frontier of a new kind, based on rivalries induced by ecological potential. He defines it as “*a neologism produced by a contemporary greened civil society, [which] can be considered as a new paradigm that embraces the mental representations and spatial constructions of eco-conquest without restricting its temporal dimension to the present time*” (ibid.). Eco-frontiers are spaces where domination is established under ecological / conservation principles. The current concept of eco-frontiers reflects the historical construction of nature and space and results from a recent dependency path in naturally valuable areas. Eco-frontiers are not necessarily located in border regions, but when they coincide, the political issues at stake are strengthened, as is the case in Poland’s mountainous borderlands.

The role of mobile borders in the creation of eco-frontiers in mountainous borderlands

- 5 The functions of borders are far from being static. They change over time and their essence is characterised by opening and closing cycles: they constantly undergo processes of “debordering” and “rebordering”. The appearance/disappearance of borders and their opening/closure are expressed through changes in function. This rationale builds on recent border studies that have drawn on the inspired writing of A.-L. Sanguin (1983), who made the distinction between two basic types of border, i.e. those that divide and those that connect. He was going against the classical literature which held that borders must act as barriers (T.H. Holdich 1916, but also Yuill 1965 or Reynolds & McNutty 1968) or economic obstacles (S.W. Boggs 1940). In general terms, mountainous areas, generally perceived as topographical (physical) barriers, were seen as offering a good basis upon which to delineate political borders (Debarbieux 1997).
- 6 However, in a globalised world, borders are commonly said to be losing their ‘fencing’ function and allowing for more flexibility of all kinds (Amilhat-Szary 2007). They offer a starting point for collaboration, while mountainous areas, both as a concept and as associated practice, have become a frame of reference for governing progress beyond differences: on borders, nature is not mobilized anymore as a figure of confrontation but as a common good to be made subject to collaborative management (Fourny-Kober, Crivelli, 2003). To go further, one could try to distinguish between border functions in eco-frontier areas according to a typology developed by Ratti, with a distinction drawn between the barrier-border, the filter-border and the contact-border (Ratti, 1996).

Table 1. The eco-border paradigm as it relates to border function

Barrier-border	Filter-border	Contact-border
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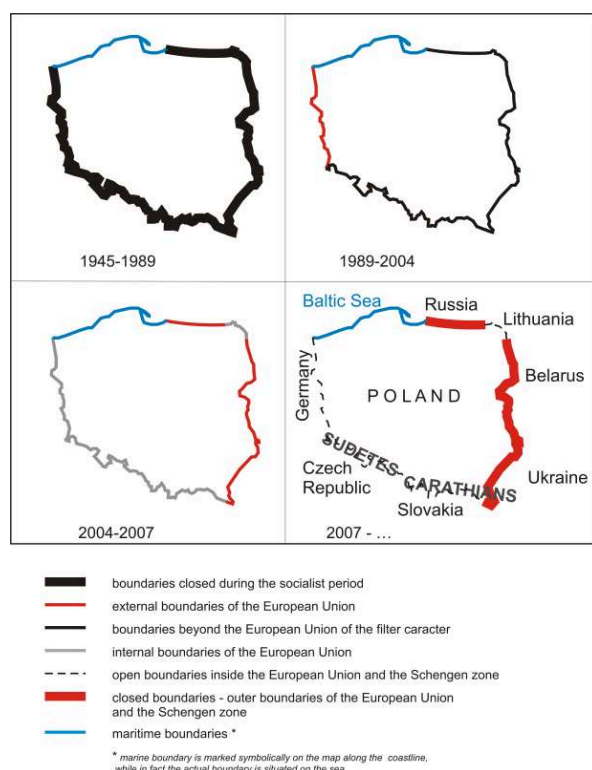
<ul style="list-style-type: none"> - Mountains and vegetation acting as barriers - Border security - Ecological domination (often by coincidence “collateral” to the natural barrier rather than intentional) 	<ul style="list-style-type: none"> - Relatively open, but with considerable degree of control - Growing attempts at cooperation and cross-stream politics - Joint protected areas - Deliberate building of an eco-frontier 	<ul style="list-style-type: none"> - Growing importance of cooperation and integration - Nature protection, Eco-frontier areas used as nuclei for cooperation or joint cross-border space - Shifting of the barrier-border function from national borders to boundaries of protected cross-border areas
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SOURCE: AUTHOR'S ELABORATION ON THE BASIS OF RATTI'S TYPOLOGY OF BORDER FUNCTIONS

- 7 This theorization is probably only valid in the case of old glacis borders in the process of opening themselves up. The functions of national borders are important factors in the transformation of border areas and the development of eco-frontiers. The latter derive from the conjunction of their peripheral location, their economic and social marginalisation, and their inferior indicators as regards population density, economic development and isolation. Many borders were drawn in unpopulated areas which have remained undeveloped buffer and/or transition zones between countries: these factors can favour the decision to embark upon a conservation process with a view to natural uniqueness being protected. When a border is relatively sealed off, perimeters of protected nature have often been designated independently on either side of a border. But as borders change into filtering or open borders, joint protection or even cross-border cooperation schemes develop, thus increasing the significance and size of the protected areas, which become more attractive, but also more exposed to human pressure. Nature protection and eco-frontier building tend to constitute major processes within such cross-border cooperation.
- 8 The ecological frontier is the boundary between civilization and the wilderness. Within areas where natural and evolutionary processes continue to generate and maintain an ever more important concern over biodiversity, the frontier used to be a moving boundary that symbolised the dominance of humankind over nature. In the Polish context, we can understand eco-frontiers as zones under the domination of nature (with human presence absent or limited), as sometimes surrounded by anthropogenic boundaries (e.g. the boundaries of nature protection areas). The presence of an eco-frontier is much more visible in the peripheral position that borderlands can represent. The eco-frontier can be located in a borderland (Guyot 2011) and be constituted by environmental cross-border cooperation (Laslaz, 2009). Interesting examples of eco-frontiers and conservation area have been studied on the borders between Argentina and Chile (Miniconi and Guyot, 2010), Bolivia and neighbouring countries (Bruslé, 2007), Canada and the USA (Moumaneix, 2007), South Africa and neighbouring countries (Ramutsindela, 2004), and Poland, Slovakia and Ukraine (Fall, 2005; Turnock 2001; Więckowski 2002).
- 9 Mobile borders can be understood as changing national limits, the changes reflecting function (e.g. from closed to open or *vice versa*), location (e.g. for political reasons after a war - as at Poland's eastern and western borders, or due to the exchange of parts of the territory -e.g. the exchange between Poland and the USSR in 1951 in the Eastern Beskids - Eberhardt 2012);, or through the modes and places of control. These

processes are rather long-term evolutions. The changing character of the Polish borders is shown in Figure 1. During the communist era (1945-1989), the Polish borders were completely closed (with the exception of some short periods, and even then with crossings highly concentrated at a very small number of points). After 1989 we observed a process of “debordering”, and the consequent transformation of borderlands. Currently, all the borders between Poland and other EU member states have been functioning for several years now as zones of contact (open borders), while borders with third countries have tightened up, despite not being as strictly closed as they were before 1989.

Figure 1. Changes to the function of Poland's borders in the years 1945-2012



- 10 Contemporary borders in Central Europe, even they are fully open (in the Schengen zone), do not disappear, and are not permanently permeable, especially in mountainous areas. Checks on people have relocated to other places within state territories, but the possibility of borders being closed continues to exist, for political reasons (e.g. through the blocking of a road), ecological reasons (e.g. the closing of a road or path in a National Park) or others motivations (e.g. sanitary). In Central Europe many cycles to the mobility of borders have appeared, e.g. seasonal (annual), weekly and daily, connected with the openness of border crossing points, National Parks and tourist paths, and with attendant processes capable of influencing the permeability of a border.
- 11 We have also observed natural processes influencing border movement and permeability. First of all, the position of a borderline may evolve with the displacement of river beds (e.g. of the River Dunajec) and with landslides. Additionally, natural processes in the mountains can lead to the destruction of a road or railway line, with the result that the crossing of a border ceases to be possible— e.g. due to a flood in 2010,

the destruction of a railway bridge near Nowy Sącz interrupted rail connections between Poland and Slovakia for many months – Więckowski *et al.* 2012). Landslides often occur in the Poprad Valley (in the Sąddecki Beskids), while other extreme meteorological events like heavy falls of snow, rain or freezing also modify crossing conditions and can close a road near a mountainous state border.

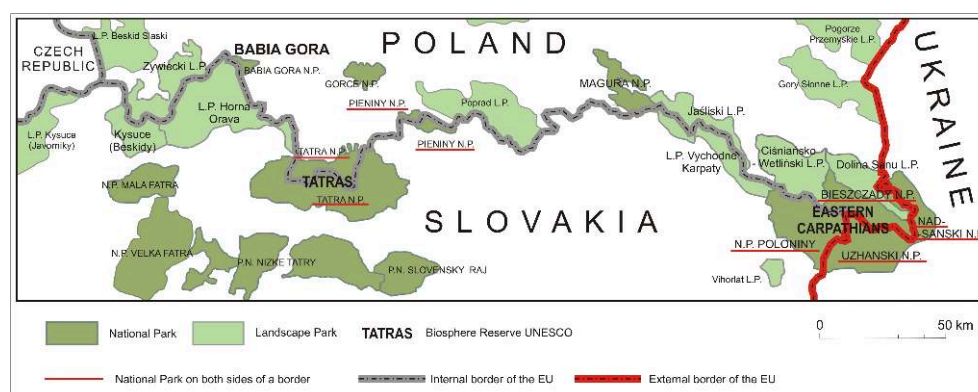
The closed border as an element in the creation of eco-frontiers

- 12 According to Young and Rabb (1992), the old political borders of Eastern Europe are associated with fascinating and relatively unchanged areas of nature and wildlife. In Central and Eastern Europe, many National Parks are in a privileged situation near state borders (Denisiuk *et al.*, 1997) – e.g. on the Polish-Slovak, Polish-Czech, Czech-Slovak, Slovak-Hungarian or Czech-Austrian borders. Many protected areas in Poland are located along the country's borders, and this is true of no fewer than nine National Parks. Additionally, two National Parks are located along the Baltic coast, while three more are close to (if not on) a border. Five National Parks enjoy an international status in connection their counterparts on the other side of the border (i.s. the National Parks in the Karkonosze, Tatra, Bieszczady and Pieniny Mountains, as well as the Białowieża (Bialowiecki) NP, cf. figure 2). The Polish-Slovak borderland is particularly rich in such initiatives, especially in the Tatra Mountains, the Eastern Carpathians and the Pieniny Mountains (Więckowski, 2002), but there are also similar initiatives along the Polish-Czech border, primarily in the Karkonosze/ Krkonoše Mountains.
- 13 Eco-frontiers in Poland and neighbouring countries (especially along the Polish-Slovak border) seem to provide a good example of eco-frontiers in borderlands. They represent two generations of eco-frontiers: geopolitical eco-frontiers and global eco-frontiers. The second generation is more closely related to the state control of peripheral regions. This process began between the Wars and culminated during the Cold War. The third and contemporary generation embraces the current success of environmentalist thinking on a global scale, driven mainly by international organisations, NGOs and civil society (Guyot 2011).
- 14 The Carpathians are very rich in natural assets. As the national borders were closed and rendered largely inaccessible, this contributed for more than a century to the conservation of natural conditions and the maintenance of biodiversity. Early initiatives included the establishment of several National Parks, such as the Pieniny National Park (1932), which immediately became the Europe's first cross-border protected area together with its counterpart across the border with Slovakia (Czechoslovakia at that time) in 1932. This movement was disrupted by the Second World War.
- 15 During the communist era (1945-1989), the tightly-closed Polish borders effectively stopped the movement of people. This was part of a policy entailing the discouragement of economic activity in wider border areas, and in the official border zones in particular – a factor that long hampered local socio-economic development. Many border areas remained isolated for decades (e.g. the Beskid Niski Mts. – after WWII, and up to the beginning of the 1990s.), or for a period of time (e.g. the Bieszczady Mountains between 1945 and the 1970s), while entire regions were marginalised. Long

periods of isolation and low accessibility helped maintain wildlife and vegetation in close-to-natural conditions and good environmental health (e.g. in the Eastern Carpathians). This in fact reflected a relocation of local populations from border areas, with the consequence that weakened settlement networks were left behind, without larger towns (c.f. Więckowski *et al.* 2012). As a consequence, the southern and especially the south-eastern borderlands became perennially underdeveloped in comparison with the rest of the country (this for example manifesting itself in a 2010 unemployment rate of 19.2% in the Przemyśl subregion and 17.5% in Krosno, as opposed to 12.3%; at national level, as well as in the fact that regional GDP in the south-east is only a quarter to a third as high as in the Kraków region).

- 16 Before 1989, this same combination of the barrier effect and the isolation of the borderlands contributed to the quality of the natural environment, which was quite often higher along the border than elsewhere. As a result the legal protection of nature became a relatively widespread phenomenon in these zones.
- 17 The Polish-Slovak border follows the Carpathian ridge along its entire course of 524 km, and thus divides a very attractive natural environment. Lying very much at the heart of Eastern Central Europe, the Carpathians have extremely rich scenic and biodiversity resources that have not been significantly eroded by modernisation over the last two centuries (Buza and Turnock, 2004). The Polish-Slovakian borderland is indeed an exceptional area from the ecological point of view, with numerous areas of protected nature, both of national and international importance. Within 50 km of the border on both sides there are 13 National Parks (6 in Poland and 7 in Slovakia), 19 Landscape Parks (14 and 5), ca. 210 Nature Reserves and many more minor areas in which nature is protected by law. The state border is straddled by two International Biosphere Reserves (of the Tatra Mts. and the Eastern Carpathians), and is in the immediate vicinity of yet another (Babia Góra) (Fig. 2.).

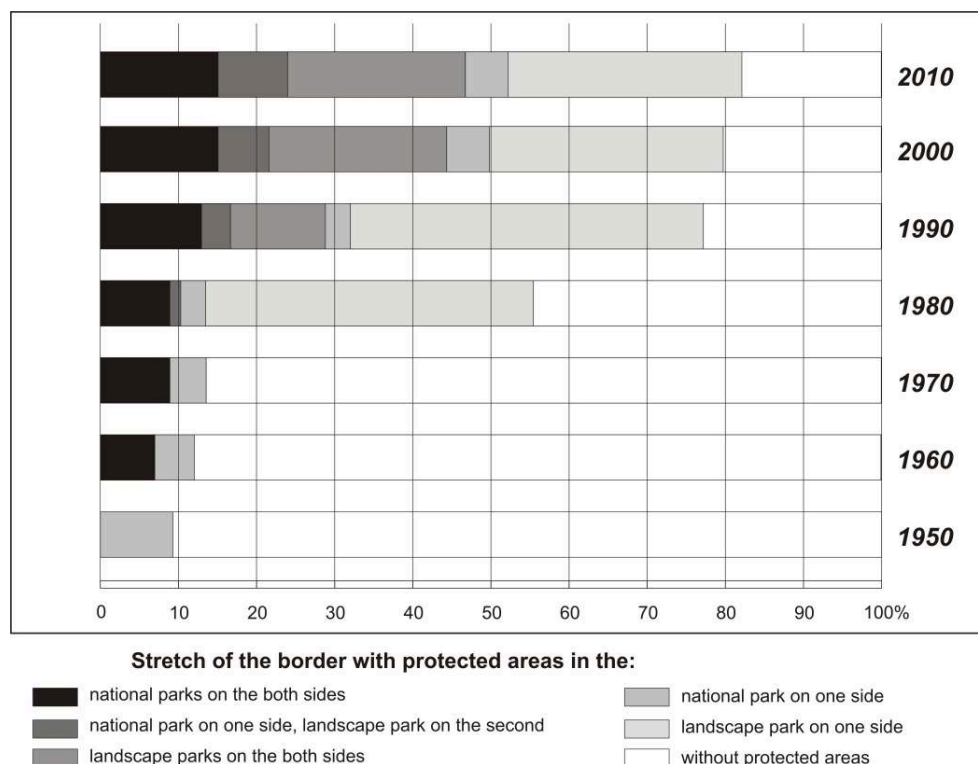
Figure 2. Protected areas in the Polish-Slovak borderland area (National Parks, Landscape Parks and Biosphere Reserves)



- 18 The Polish-Slovakian border has the longest stretch of protected areas in its vicinity. National and Landscape Parks about on to a 412 km stretch of border (or some 80% of the total length; Fig. 3.). If account is taken of designated buffer zones, this stretch lengthens to 453.3 km, equivalent to 87.5% of the entire border between the two countries. Making reference to Poland's National Ecological Network it can be said that Poland's border with Slovakia is the only one, excepting the Baltic coast, which could be protected along its entire length. As much as 90% of the border's length is

constituted by biocentres, nodal areas and ecological corridors of international significance. This is the only border with such a high share of areas included in the ecological network.

Figure 3. Percentage of National and Landscape Parks directly adjacent to the Polish-Slovakian border in the period 1950-2010.



SOURCE: AUTHOR'S WORK

The “debordering” process after 1989

- 19 After 1989, the opening of borders resulted in a massive increase in cross-border traffic (both ways: 2.8 m people in 1980, 6.2 m in 1990, 18 m in 1998), as well as the beginning of cross-border cooperation (Więckowski 2002). That cooperation included efforts to designate joint protected areas (e.g. International Biosphere Reserves and cooperation between National Parks) On the one hand, from the geopolitical point of view, the Polish borderlands (e.g. between Poland and Slovakia, Ukraine and Belarus) constitute buffer zones with many National Parks cut across by the international borders. On the other hand, these borderlands constitute a kind of a global eco-frontier. The process of opening up the borders (changing their functions) creates a new situation and encourages the establishment of cross-border parks, green edges and environmental networks, as well as the development of eco-tourism. Poland's recent European integration has changed these functions towards openness, thereby encouraging integration of neighbouring territories. At the same time, external EU and Schengen zone borders have been tightened, although they remain much easier to cross than before 1989.

- 20 New levels of anthropopressure imposed by both settlement and tourism have been experienced, due to a rising standard of living, an increase in mobility (tourist traffic and transit), and an expansion of infrastructure, including roads that have increased the accessibility of areas recently considered very remote, such as those found close to borders (Więckowski *et al.* 2012). This anthropogenic pressure is concentrated in some parts of the Carpathians (e.g. in the Tatra and Pieniny ranges), as well as in nearby valleys, in line with tourist attractiveness and relatively good accessibility, as strengthened by strong national symbolism (as “must-see” attractions).
- 21 Changes to the functions of national borders have had a marked influence on the functioning of eco-frontiers, and on new cross-border human pressure. National borders have been becoming steadily more permeable. In 1990, the whole Polish-Slovak border had only 5 crossing points, but in the period 1990-1995, six new transboundary roads were constructed and 6 new crossing points opened (Więckowski 2002). Today, they are 16 transboundary roads to facilitate cross-border accessibility. Some of the regions (e.g. the Slovak part of the Tatras and the western part of the Beskids) are improving existing roads (i.e. new parts of highways or expressways). Of course, the typical mountain environment of the border region constrains roads to a rather specific configuration, which tend to follow valleys. In 1999, the establishment of 22 new tourist crossing points was commenced with, all of these being opened by day only. Just a few were opened the whole year round, while seven were opened only in the summer season. The others that remained open outside the season (October through March, or November through May) were so for a shorter time. This was a new seasonality to the permeability of borders: seasonal and daily, and additionally to differences in national accessibility (only a few of the road crossing points were opened to all the citizens of the world, while others were only for Poles and Slovaks, or serve as tourist crossing points for 32 selected nationalities). There has thus been a pulsating reality of border openness and closedness, in temporal, spatial and national terms.
- 22 Cross-border cooperation on environmental matters has advanced significantly since 1989, when the opening of borders facilitated contacts and fostered cooperation in respect of protected areas coming out of isolation in frontier zones (Turnock, 2001). National Parks located on either side of the Polish-Slovak border have recently become important actors as regards collaboration in a number of domains, including nature conservation, tourism, transport, water management, forestry, trade, culture and education (Więckowski 2002). The perception of a common natural environment of the mountains is the element that links communities on either side of the border - something that has gained reflection in the names of the Euroregions (of the Eastern Carpathians, the Tatra Mountains and the Beskids) and tourist regions (same names). This sharing of the environment creates advantageous conditions for joint development and promotion (e.g. the organization of events and tourist fairs, exchange of promotional materials, folders, maps and guidebooks, and a common system of tourist information in the form of poster maps (of the National Parks of the Pieniny Mts. on both sides). Also in Pieniny, tourist routes are being adapted to the needs of tourists from both countries, notably as new ones are being designed. It is important to underline that cartography and maps have played a central part in the construction of the « Carpathians » as a discursive entity (Fall and Egerer, 2004), and the mapping of the conservation entity has been an element to information about cross-border cooperation (Więckowski 2002).

- 23 In the Carpathians, NGOs and the European Union have additionally funded many programmes to promote transnational cooperation. The Alpine convention has been also extended to the neighbouring Carpathians, with the creation of the Carpathian Network of Protected Areas and the drawing up of the Carpathian Convention. The National Park, with its mission to preserve nature may serve as a symbolic reference point to highlight the central role of the frontier in Western society (Hall, 2002). *“Parks should not be treated as isolated reserves, but as integral parts of the complex economic, social, and ecological relationships of the region in which they exist”* (Fall, 2002). That geo-economy of the eco-frontier is very powerful, and the eco-conquest works as a new economic appropriation of the world (Castree, 2008). For instance, the cross-frontier/cross-border protected areas linked to environmental networks supported by globally operated NGOs are central to this new geopolitical reality linking nature and space (Fall, 2002). *“Cross-frontier parks have an economic logic, namely, the use of nature in the promotion of tourism and economic development”* (Ramutsindela, 2004). These transboundary protected areas were constructed discursively by the different *“relations and links within heterogeneous social networks that included both human and non-human actors”* (Fall, 2005). According to M. Ramutsindela (2004), the link between wilderness and transfrontier parks is articulated in the vision of reestablishing the “natural” ecological systems that had been interrupted by humans.

Current processes of mobile borders in the mountainous borderland areas of Poland

- 24 The Polish-Slovak borderland is functioning as an eco-frontier in the contemporary, third-generation meaning of the term. Much of the area is characterised by eco-dominance, mainly due to strong legal protection. Rather than a large single eco-frontier it forms an archipelago of smaller islands of National Parks and other protected areas. Even the existing ecological corridors (e.g. NATURA 2000) are cut across by transport infrastructure. Eco-dominance may result in certain barriers to development, but can also create a basis for the development of tourism, especially eco-tourism. Tourism indeed constitutes the leading, and sometimes the only industry in such areas (see Więckowski *et al.*, 2012).
- 25 Since Poland's accession to the EU and the Schengen zone, the crossing of its national border has no longer been restricted to formal crossing points, and the border as a barrier has disappeared gradually, allowing nearly entirely free movement of people and business. As the barrier function was eroded from the national border, it gradually relatively reappeared at the boundaries of protected areas, especially National Parks. An entrance to a Park is organised similarly to a crossing of a national border. It is possible only through an entry point and requires additional payment (purchase of a ticket). In a National Park in Poland, one may walk only along marked tourist paths. National Parks are legally required to control traffic at their borders under laws on nature protection. Major restrictions to traffic include: no traffic from dusk to dawn, seasonal closure of protected sectors (e.g. in the Slovakian part of the Tatra NP, areas above the tree line are off-limit during winter, 1 November-15 June) and a restriction of all movement to marked paths only, which also means that a border can only be crossed along such routes). The boundaries of National Parks are the lines of control (e.g. of flows of people). This situation is used by nature conservationist for prohibit

crossing of a state border crossing – it is often enough to close a segment of a tourist path near a state border (e.g. in the Tomanowa Pass in the Tatras). National Parks are only visited on a temporary basis, with very limited number of tourists staying for longer periods in mountain refuges. A new seasonality has emerged in the functioning of borders, i.e. mobile borders, in which boundaries of protected areas play a significant role. There are a number of cycles involved, such as: daily (National Parks closed at night), annual (e.g. closing of paths in the Slovakian part of the Tatra NP, which excludes a vast part of it from human activity) and other (open Slovakian-Polish borders, but tightly sealed Polish-Ukrainian borders). Such eco-frontiers have become cyclical off-limit zones.

- 26 Today in the borderlands it is possible to observe many borderlines corresponding to administrative, state and natural protected areas divisions (with different strengthens and permeability) as well as eco-frontiers (lines or zones between wilderness and human presence). These borderlines overlap with one another – and can be visible or not. The lines that function as the strongest barriers to the flows of human beings are the national borderline and the borders of the protected areas, with their juridical consequences. The boundaries of National Parks and Nature Reserves surround strictly protected areas with very much limited human activity and presence. They function rather as closed, isolated islands featuring eco-dominance.
- 27 Nowadays many factors influence the functioning of eco-frontiers. However, the four main factors include: the need for nature protection (at national and international level: e.g. the creation of Biosphere reserves, and NGO activity), tourist demand (on behalf of people coming from “outside”), the local population’s needs (and economic interest), and cross-border cooperation (supported by EU funds), (Fig. 4).

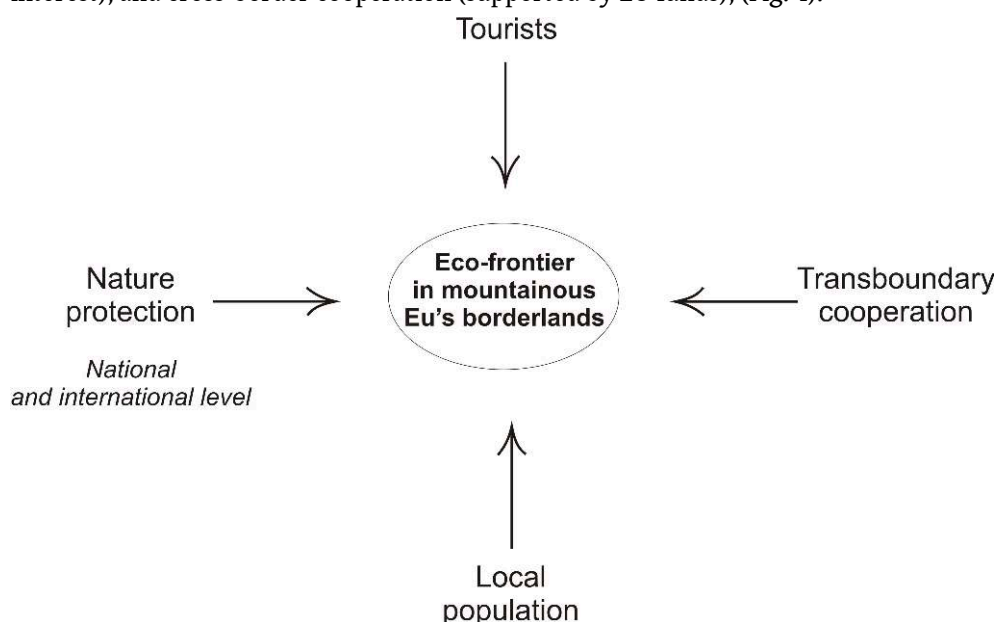


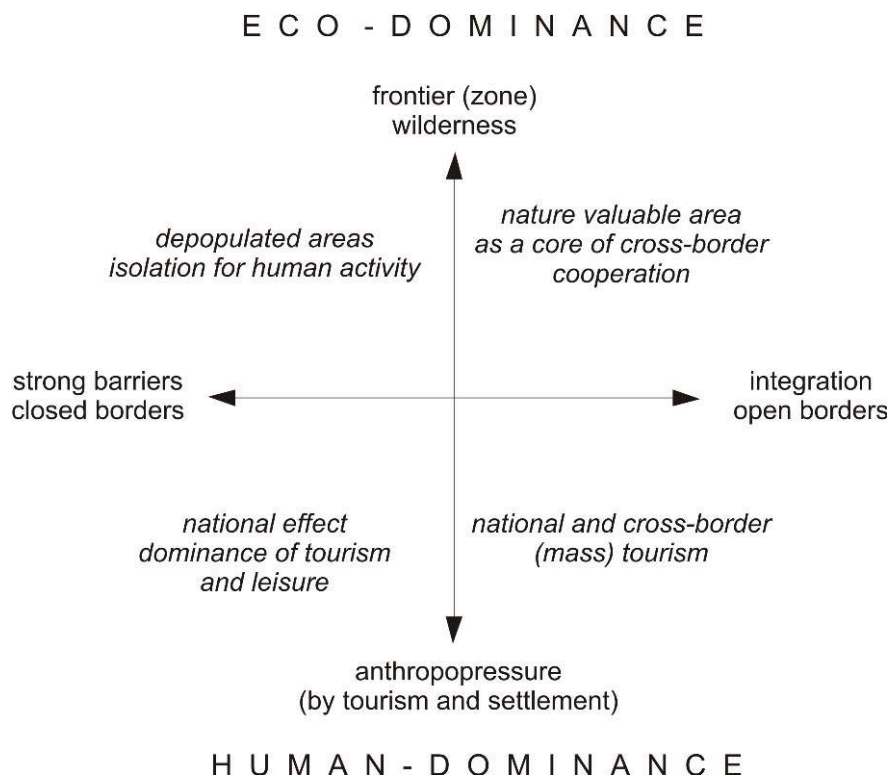
Figure 4. Four main decisive factors influencing eco-frontier functioning in the Polish-Slovak borderland.

SOURCE: AUTHOR'S OWN PROPOSAL

Conclusions and discussion

- 28 Two processes weigh heavily on the functioning of eco-frontiers in border areas. One of these has to do with national borders, which range from closed borders featuring strong barriers to open borders conducive to integration; while the other process involves the human impact on the environment across a spectrum ranging from wild nature that is little transformed by humans through to intense anthropopressure (e.g. development of tourist traffic). Depending on the dominant process, a given border area can be located in one of four quarters of a quadrant (Fig. 5).

Figure 5. Relationships between mobile borders and human impact on the environment



SOURCE: AUTHOR'S PROPOSAL

- 29 This paper demonstrates that eco-frontiers are highly dependent on the function played by national borders. Barrier-borders once strengthened the 'wildness' of nature, where the isolation increased eco-dominance, and the presence of mountains enhanced the political barrier. A barrier that is both political and natural is effective in repelling human activity: it enhances an area's peripheral situation and isolation, thus improving the quality of the natural environment. Around the Polish borders, the change experienced in the function of the national border towards a more open one helped initiate a cross-border cooperation process that, importantly, involved areas of protected nature. However, even the wholesale opening of borders in the Schengen zone has failed to fully open the eco-frontiers. Boundaries of National Parks have proved stronger than national borders in terms of the restrictions they impose (since, for example, entry into a national Park is only possible through fixed entry points), due to strict natural protection laws that can close off these areas either temporarily or on limited sections. Changes at the borders, such as their opening and closing, are not a

thing of the past. Indeed, they continue, in line with daily, annual and longer or unpredictable cycles. Such mobile borders and the existing archipelago of eco-frontiers form a pulsating reality as the boundary between nature and human presence opens and closes again.

- 30 The conclusion to be drawn from this analysis is that the areas adjacent to the Polish borders, especially in the mountains, have the potential to preserve their valuable natural features. Eco-frontiers in Central Europe constitute strategic spaces for the future of nature's resources and global change, while having become the nucleus for cross-border cooperation of enormous significance in the shaping of cross-border relationships and cross-border tourism, environmental protection may also exert an adverse influence on certain other activities that are to be analysed too.

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