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**Local Resource Policies. Informality, Consumption, Landscape Relations**

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## Abstract

This study presents the first results of a micro-level ecological and economic anthropological research conducted in the village of Tiszapéterfalva, located in Ukraine's Transcarpathian region. It explores the everyday survival strategies and informal income-generating practices—such as smuggling, cross-border trade, and irregular migration—that emerged in response to the unemployment crisis following the post-socialist transition. While these informal activities supported household livelihoods and compensated for the weakness of state institutions in peripheral border regions, they also had negative ecological consequences. The overuse of natural resources, pollution, and the decline of agricultural practices weakened the community's adaptive capacity and disrupted traditional relationships with the landscape, ultimately threatening local resilience.

## Keywords

post-socialist economy, Ukraine, socio-ecological system, informal economy

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# Local Resource Policies. Informality, Consumption, Landscape Relations



The study focuses on two main themes: informal livelihood strategies, i.e. economic actions not or only partially controlled by the state (ranging from informal family subsistence food production, undeclared work and foreign employment to illegal border smuggling), and the links between local ecological systems. It thus analyses how, during the years of post-socialism – the prolonged transition from a planned economy to a capitalist market economy – rural, village households in the border region of Transcarpathia [official name: Zakarpattia Oblast] developed everyday economic adaptation techniques and how these were integrated into a broader local ecological (environmental) resource management system.

This paper, following Moerlein and Carothers, approaches adaptation not as a narrow phenomenon (controlled and isolated by biophysical factors), but as a complex system encompassing the „whole environment of change"[1] , which includes not only environmental factors but also everyday livelihood strategies, poverty, cultural norms, hierarchical social relations and other local historical-economic conditions. In the Transcarpathian settlements I have studied, such external factors in the post-socialist period – in the broad sense of the term – include, for example, the severe capacity problems of the Ukrai-

1 Moerlein – Carothers, "Total environment of change", 10.

nian state, the persistent crisis of formal institutions (economic, political, social and financial systems), the popularisation and gradual standardisation of informal (non-state) economic strategies, or even the entrenchment of historically established unequal land tenure relations (the availability or lack of land and property as an economic resource), which in recent years have fundamentally determined the development opportunities of Hungarian villages and rural settlements in the border areas.

In my study, I will argue that environmental (economic, political, social, ecological) changes, broadly understood, create hierarchical adaptation systems in local societies, within which adaptation to economic changes – at least in the Transcarpathian settlements I studied – overrides ecological adaptation and related conservation concerns. In this way, the everyday survival techniques developed in the post-socialist transition act as drivers of landscape change in border villages and, ultimately, as one of the dominant local institutions that reproduce ecological crisis phenomena.

In this context, my study seeks to answer the following three questions:

1. In the Transcarpathian Hungarian settlements concerned, how did the members of the local population adapt to the structural changes after the regime change (employment crisis, privatisation, new ownership and property relations) with specific informal economic strategies and adaptation techniques?

2. What are the contemporary land-use practices of the local population, in particular of households specialised in agricultural production?

3. How do informal economic actions in peripheral, border spaces affect the ecological relations within local, rural and village lifeworlds? In other words, how do economic and other (‚environmental', ‚natural') risk management strategies and adaptive behaviours fit together?

First, a brief description of the research site. I will then describe the theoretical and conceptual framework of the study and the structural conditions (local economic, political and social conditions) that have contributed to the develop-

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ment of divergent resource management and landscape use practices and multiplicative (multi-level) adaptation models by local society in the post-socialist period.

## Location of the study (regional and local contexts)

In Ukraine, the international geopolitical conflict (the so-called Ukrainian-Russian hybrid war) and internal political tensions that have been unfolding in the eastern provinces of the country since 2014 have led to a very serious political, economic and social crisis in recent years.

According to World Bank data, in 2020, Ukraine's per capita gross domestic product (GDP) at *purchasing power par*ity (PPP) was only 82.6% of the level at independence (24 August 1991).[2] With this economic performance, Ukraine has been one of the poorest and least economically developing sovereign nation-states in recent years, not only among the Central and Eastern European countries, but also among the continent as a whole.[3] This situation is further exacerbated by the fact that the size of the shadow or black economy within the Ukrainian national economy, despite a slow decline over the past few years, remains very significant: according to Ukraine's Ministry of Economy, the informal sector accounted for about 28% of the country's GDP in 2019 and 30% in 2020.[4]

2 While in 1991 the GDP per capita (PPP) was $14,968, in 2020 it will be only $12,376. Online: World Bank GDP per capita, PPP (constant 2017 international $) (15 June 2022)

3 Online: IMF: List of European countries by GDP per capita, PPP. *Statistics Times*, 2019 (15 June 2022)

4 Online:Містерство економіки України (= Ukraine's Ministry of Economy): Загальні тенденції тіньової економіки в Україні у січні-вересні 2021 року (= Major trends of the shadow economy in Ukraine in January-September 2021) (15 June 2022) Several researchers consider the size of the shadow economy in Ukraine today to be much larger than the figures in the official statements. While, for example, Ukraine's Ministry of Economy put the level of illicit economic transactions at only 35% of Ukraine's GDP in 2015, 32% in 2017 and only 28% in 2018, Medina and Schneider estimated the share of the black economy in

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Meanwhile, the loss of Crimea and the military occupation of the industrial zones of eastern Ukraine (Donetsk, Luhansk) have caused a drastic decline in the living standards and economic marginalisation of the population throughout the country, which will certainly be further exacerbated by the full-scale Russian invasion launched on 24 February 2022, not only in the short term but also, presumably, in the medium term.[5]

Based on these and other indicators, which can be cited at will, it seems that not only the institutional reforms in Ukraine, which have been dragging on since the early 1990s, but more generally the whole post-socialist transformation process itself has been a fundamental failure.[6] From this perspective, until recent years the post-socialist Ukrainian nation-state was one of those dysfunctional states - in other literary terms: „*weak*", „*fragile state*", „*failed state*", „*quasi-state*",[7] „pseudo-state", where the dysfunctions of the formal governance system (i.e. instability of the political system, legitimacy and rule of law deficit, high corruption levels, increasing poverty, deteriorating infrastructure, etc.) have been the main reasons for the failure of the state to function properly.), in many cases the state has simply been unable to perform its basic functions.

the country's GDP at 42.9% in 2015, Abel Polese and his colleagues estimated it at 38.3% in 2017 and 38.5% in 2018.
Medina – Schneider, "Shadow Economies around the World", 75.
Polesea – Moiséa – Lysad – Kerikmäee – Saukaf – Seliverstova, "Presenting the results of the shadow economy survey", 110.

5 The micro-level and complex (economic, social, cultural, political) effects of the military expansion launched by Russia against Ukraine on 24 February 2022 are currently unknown. In the absence of in-depth empirical research and credible data, we can only assume that this event could trigger a much more serious crisis and new ethnodemographic processes (ethnic stratification, population turnover, new inter-ethnic conflicts, social disintegration, etc.) in the Western Ukraine region, perhaps even compared to previous years. Given the fact that we currently do not have credible information to assess these phenomena, and taking into account the fact that the empirical fieldwork on which the study is based was completed in the years before the Russian-Ukrainian war in the Tiszahát settlements (2021), in the present study I will only examine informal economic practices in the period before the military occupation of Ukraine.

6 Karácsonyi, "Felosztás vagy felemelkedés?", 57.

7 For a good overview of the different meanings and applications of these concepts, see, for example, Rotberg, *Failed States, Collapsed States, Weak States*., Conjau – Popescu, "Analysis of failed states", Robert, *Quasi-States*; Migdal, „Studying the State".

Over the past three decades, the institutional crisis and dysfunctional functioning of the state have become even more pronounced in peripheral or disadvantaged regions hundreds of kilometres from the country's centre of power.

In many respects, this was also the case in the Western Ukrainian region of Transcarpathia, which, on the one hand, has historically been separated from other regions of Ukraine, partly due to its multicultural, multilingual and multiethnic population, and on the other hand, due to its specific geographical location, it is simultaneously part of the border periphery and interference zone of several countries (Hungary, Slovakia, Romania, Poland, in addition to Ukraine). On 1 January 2020, the average monthly income of the population living in the region was 9112 hryvnias (about 91,000 HUF) in nominal terms, 15.1% below the national average (10727 hryvnias per capita) and 19.2% below the average income in Kyiv Oblast (11267 hryvnias per capita).[8] However, since 2014, prices for basic foodstuffs and household energy (gas and electricity) have been gradually rising, despite the low purchasing power of the population, and are now close to, and sometimes even at the same level as, those in neighbouring countries. However, the economic development of the country - and, as part of this, of the region - and the low level of social and health care for the population are perhaps even more strikingly reflected in the fact that in 2017, life expectancy at birth for Ukrainian citizens was only 72 years (67 for men and 76 for women),[9] which is about 2-7 years below the average for the region.[10]

The specific location of the research, where I have been conducting anthropological fieldwork and systematic empirical data collection for several years (since 2007), is the Tiszahat region of South Transcarpathia (Tiszabökény, Far-

8 Online: Ukraine State Statistical Service (Державної служби statistics України): Average monthly income per region in 2020 (Середня заробітна плата за регіонами за місяць у 2020 році) (2022.06.20).

9 Timonina (szerk.): *Demographichnyi щorikiknyi,* 53.

10 In 2017, life expectancy at birth was 79 in the Czech Republic, 78 in Poland, 76 in Hungary, 76 in Romania and 74 in Belarus. World Bank: Life expectancy at birth, total (2017 year) (2022.06.20).

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kasfalva, Tiszapéterfalva, Tivadar, Forgolány). This microregion is located in the Nagyszőlős district, in the area delimited by the rivers Tisza and Batar, at almost the same distance (10-12 km) from the official Ukrainian-Hungarian and Ukrainian-Romanian road border crossings.


**Figure 1 Geographical location of the Hungarian settlements in Tiszahát (MTA CSFK Geographical Institute; edited by Zsombor Nemerkényi)**

According to the latest official Ukrainian census of 2001, the total population of the five villages I surveyed is 5122. The absolute majority of these, 96.4% (4,942 people), identified themselves as Hungarians, while the combined share of the Ukrainian and Roma population, according to the county-level data, did not exceed 3.6% (3.45% and 0.15% respectively) in any of the villages.[11] According to the census I conducted in this group of villages, the share of the Roma population in the population, slightly higher than the official figures in 2001, was 8.3% (438 people). In the last twenty years, partly due to very rapid and profound ethnodemographic processes (international emigration, low reproduction, natural

11 Molnár – Molnár, *Kárpátalja népessége és magyarsága,* 83–84.

attrition, etc.) affecting the whole of Transcarpathia, the Hungarian population has drastically decreased, while the Roma population has significantly increased (however, in the absence of official and credible statistical data and surveys, we are unfortunately unable to accurately capture these changes and trends).

Among the settlements studied, Tiszapéterfalva has been the micro-regional centre of four other settlements (Tiszabökény, Tiszafarkasfalva, Tivadarfalva, Forgolány) since 1958, due to the administrative-economic merger of the Tiszahát villages, where one of the largest collective economic enterprises in the region - the „Border Guard" Kolkhoz - operated. In 1978, the large-scale agricultural enterprises of two villages (Nagypalád and Fertősalmás) were added to the „Border Guard" kolkhoz, which comprised the human resources and economic assets (land, labour, livestock, means of production) of five villages. The resulting large farm was the largest employer in the area from the 1980s, with employees working on some 6646 ha of arable land and large-scale livestock farming (cattle, sheep and pigs).[12] From the late 1960s onwards, a number of factories (brickworks, canning factory, meat processing plant, optics plant, wire-joining plant, sawmill, IKEA furniture factory, fishing and sports factory) were set up in the colony in Tiszapéterfalva. Thus the economy, which initially had a distinctly agricultural profile, generated 60 % of its total income from industrial production in 1980. For decades, hundreds of families in the settlements of Tiszahát were able to make a living from industrial wage labour.

12 As of 1 January 1980, of the total area of the united kolkhozkolkhoz (6646 ha), 5017 ha were arable, 1328 ha were meadows and pastures, 64 ha were forests and 237 ha were orchards. NKHLR = Archives Department of the Administrative Office of the District of Nagyszőlős, 1980. Summary report on the work of the management of the „Border Guard"kolkhozkolkhoz in 1980. 3. Number of livestock on 1 January 1981: 5033 cattle (1200 cows), 1740 pigs (115 sows), 6527 sheep (3400 ewes). NKHLR (1980): ibid. 17.
(The archival sources and materials held in the NKHLR are not organised in the usual way (archival units), but according to administrative and chronological principles (municipalities and years), without specific labels. Accordingly, I refer to the archival documents preserved from the former „Border Guard" kolkhoz in the villages of Tiszahát by indicating the place of origin (NJKHLR) and the year of origin of the sources, in contrast to the traditional archival notation.)

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In the Hungarian villages of Tiszahát in the 1990s, the post-socialist economic and political transition created a very strong and lasting employment and livelihood crisis. As a result, the population was forced to develop a number of innovative alternative income-generating strategies (smuggling, border clandestine trade in clothing, goods and second-hand goods, foreign guest work, etc.) due to the decline of the industrial and agricultural enterprises and production units of the collective economy. Such and similar informal techniques, such as the blat system (i.e. economic exchange based on the exchange of favours), are commonplace and outside the (formal) organisational framework of the state, i.e. bypassing taxation, registration and other regulations,[13] barter transactions between individuals and businesses (economic transactions without cash flow),[14] official corruption,[15] patronage[16] were phenomena that were widespread throughout Ukraine, both in the Soviet and post-socialist era.[17]According to a study by one researcher, Robert Kravchuk, informal market and capital substitution[18] arrangements such as the above accounted for about 60% of the total economic output of Ukraine in the mid-1990s,[19] and their role and social importance did not decline at all in the 2000s and beyond.

## Conceptual-theoretical framework of the study

For the analysis of micro-level landscape use practices in the Ukrainian-Hungarian borderlands I use mainly the analytical concepts of adaptation, informality, diversification and pluriactivity. Therefore, before presenting the empi-

13 Ledeneva, *Russia's Economy of Favours,* Ledeneva, "From Russia with blat"

14 Humphrey, "Barter and Economic Disintegration"

15 Zaloznaya, *The Politics of Bureaucratic Corruption*.

16 Abente Brun – Diamon, *Clientelism, Social Policy.*

17 Hopkin, "Clientelism, Corruption and Political Cartels"

18 Böröcz, "Színlelt nagy átalakulás? Informális kiút az államszocializmusból." 35.

19 Kravchuk, *Ukraine Economic Reforms,* 18.

rical research experiences, I will briefly discuss the meaning of these terms and the main literature approaches that inspired the analysis.

The modern social science concept of ‚adaptation', as is well known, originates from the field of biology (Darwin), where the term was originally used to describe specific changes in phenotypic characteristics[20] that enabled a biological organism (individual or population) to increase its chances of earlier reproduction, survival or longer-term survival.[21] The concept was introduced into the discourse of ecological and socio-cultural anthropological studies under the influence of the evolutionist and neo-evolutionist research paradigm, where, from the 1950s onwards, complex social systems and their structural and functional modifications as a result of various (mainly exogenous) influences began to be understood by analogy with the physiological model (the ‚biological organism').[22] In this approach, and without taking into account the details, ‚adaptation' is still generally understood by the authors as risk management strategies[23] that enable individuals and households to reduce their vulnerability to global (biophysical, economic, social and other) threats and shocks in an operational way.[24]

In this paper I follow the definition of Obrist and his colleagues.[25] According to Obrist, ‚adaptation' is nothing other than the ability to access certain types of

20 Bock, "The Definition and Recognition of Biological Adaptation".

21 Phenotypic change takes different forms, so we can talk about different (physiological, biological, evolutionary) adaptations. For a summary, see Bock ibid.

22 Alland Jr, "Adaptation"

23 Bollig, *Risk management in a hazardous environment,* Crate, "Climate and culture"; Moran, *Human Adaptability,* Sutton – Eugene N. Anderson: *Introduction to Cultural Ecology*. Lanham – New York – Toronto – Plymouth, UK, MD: AltaMira Press, 2014.

24 Several authors draw a sharp distinction between two forms of social responses to climate change, *coping* and *adaptation.* Thus, while the former term in ecological discourse usually refers to a short-term response to an event, i.e. a state of unresolved stability and resource use, the latter term is usually used to denote longer-term changes. See Agrawal, "Local Institutions and Adaptation to Climate Change", Pelling, *Adaptation to Climate Change.* In other approaches, ‚coping' is more a reversible category, whereas ‚adaptation' can be described as an irreversible change phenomenon. White et al, *Disaster Risk Reduction.*

25 Obrist – Pfeiffer – Henley, "Multi-layered social resilience"

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capital (economic, social, relational, etc.) that enable social actors not only to cope with adverse circumstances (reactive capacity) but also to seek and create new opportunities in various crisis situations (proactive capacity). In doing so, they develop novel competences (i.e., positive outcomes) in order to mitigate the negative consequences of external influences.[26]

A key issue in understanding the concept of „*adaptation capacity*" is to examine the institutional context, i.e. the role of divergent formal and informal structures and networks that regulate social actions (including ecosystem and resource management).[27] Following North's approach, I consider local institutions as culturally constituted frameworks, regulatory ‚rules *of the game*', determining social interactions, including both ‚formal' (e.g. the constitution and laws codified by the state) and ‚informal' rule systems (‚codes of conduct, norms of behaviour and conventions').[28]

By „informality", I mean primarily actions and interactional practices – based on social trust and interpersonal relational capital – that give individuals or groups of individuals (family, kin, subcultural or other small communities) privileged access to resources in areas where state control is too strong or, on the contrary, the state's regulatory capacity is too weak or inefficient. In other words, where formal institutions are hyper-functional or dysfunctional. (Among the scholars working on the subject, Abel Polese and his co-authors also take the former definition as their starting point when they draw a sharp distinction between two types of informal economic transactions: the phenomenon of informal mechanisms *in spite* of the state and the phenomenon of informal mechanisms *beyond the state.*[29]

26 ibid., 289.

27 Ostrom, *Understanding Institutional Diversity*, Agrawal, "Local Institutions and Adaptation"

28 North, *Institutions, Institutional Change, and Economic Performance*, 3.

29 Polese – Kovács – Jancsics, "Informality „In Spite Of" or „Beyond""

These local, often incongruent[30] formal and informal institutions are of particular importance for ecological-environmental adaptation. Because the human risk management strategies and adaptive capacities are usually highly socially embedded.[31] In the context of everyday life, this often means that formal and informal institutional networks, for example, not only provide access to different resources (food and economic capital) or regulate the redistribution of specific types of capital within the community, but also often mediate novel patterns of adaptation, innovation and normative behaviours that individuals, households and communities can mobilise effectively to reduce climate change risks.[32]

At the same time, the resources represented in institutional structures are very unevenly distributed among individuals, households and smaller (religious, ethnic, social) sub-communities in local society. The members of local society usually have different entitlements[33] (money, knowledge, contacts, opportunities for action, etc.). These different entitlement ‚packages' influence the access of individual actors to formal and informal networks, and thus can usually lead to very differentiated adaptation strategies even within a single local community.[34]

30 According to Helmke and Levitsky, informal („popular") institutions can establish four different types of relationships with formal („state") institutions: 1) *complementary*, 2) *accommodating*, 3) *substitutive*, or even 4) *competing*. According to the authors, two factors determine which of these possible variants of inter-institutional relations prevails. On the one hand, do the outcomes achieved by following informal rules converge or diverge from those achieved by following formal rules? On the other hand, does the outcome of the relationship also depend on the state's enforcement capacity and capability, i.e. whether the state, through formal institutions, is able to enforce written/paper laws in practice? Helmke – Levinsky, *Informal Institutions and Democracy: Lessons from Latin America*, 14.

31 Pisor – Jones, "Human adaptation to climate change", 5.

32 Douglass – Rasolondrainy, "Social memory and niche construction"; Holland – Ready – Pisor, "Want climate-change adaptation?"; Pisor – Jones ibid., 5.

33 According to Neil Adger, these „entitlements are the actual or potential resources available to individuals by virtue of their own production, possessions or mutual agreements." Adger, "Vulnerability", 270.

34 Goldman – Riosmena, "Adaptive Capacity and Vulnerability", 589.

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Accordingly, the present paper takes Agrawal's model – based on institutional sociology – as a starting point, which differs from the traditional ways of typifying adaptation practices (proactive-reactive, individual-collective, spontaneous-planned oppositional pairs). This author distinguishes five main and distinct types of adaptation strategies that reflect environmental (biophysical, economic, political) risks:

1. Geographical mobility – spatial distribution of risk (migration of agricultural pastoralists, labour migration, involuntary migration).

2. Accumulation – spreading the risk over time (water storage, food storage (crops, seeds, forest products), livestock accumulation).

3. Diversification – sharing risk across asset classes (asset portfolio diversification, skills and vocational training, occupational diversification, crop selection, production technologies, freezing choices, livestock diversification).

4. Community pooling of resources and assets – sharing risks between households (forestry, infrastructure development, information gathering, disaster management).

5. Market exchange – the sale of risk through contracts (better market access, insurance, sale of new products, sale of seeds, animals and other inputs), which can replace any of the other four categories if households have access to markets.[35]

Local and traditional land use practices can, due to the functioning of formal and informal social institutions and the segmentation of local communities, shape very different individual and household adaptation strategies, which are usually captured in the international literature by the concepts of „diversification" and „pluriactivity" in the sphere of economic action.[36]

35 Agrawal, "Local Institutions and Adaptation".

36 According to Vik and McElwee, the boundaries between the two concepts are somewhat

By „diversification" I mean – partly in the wake of the above criticisms – conscious model shifts or shifts in the micro-level resource management policies or strategies of individual households. The term, in my approach, refers to the everyday strategic actions and forms of economic activity through which agricultural households attempt to adapt to new changes in the economic-environment (on and off the farm) by modifying their previous economic behaviour and/or current income-generating activities.

Diversification of farms is a very important, but only one possible component of economic adaptation of rural households. As the literature shows, family farm adaptation techniques can vary widely. They may include concentration and intensification of agricultural production (through expansion of land use or livestock, increasing value added or even cooperation with other farmers); specialisation of agricultural practices (through reallocation of existing capacities); diversification of agricultural activity; various techniques of formal, informal, illegal off-farm income generation (non-agricultural employment, farm abandonment, external business activities, increasing dependence on public and EU compensation payments) as well as the reduction, partial or total abandonment of agricultural activities.[37] But, as McElwee aptly points out, we must also consider as part of economic adaptation the seemingly negative (but in the longer term not infrequently profitable) solutions whereby members of a family farm, under external pressure, for example in a situation of economic crisis, make the strategic decision to simply do nothing.[38]

*blurred*, but in general, the literature defines diversification as farm-centred income-generating activities, i.e. the forms of activity that are generated by the reorganisation of resources (land, labour, capital) within or associated with the economy. By contrast, the term pluriactivity in the economic geography discourse refers primarily to capital accumulation strategies outside the farm economy. Vik – McElwee, "Diversification and the Entrepreneurial", 394.

37 Barbieri – Mahoney, "Why is diversification an attractive farm adjustment strategy", 58-66; Breustedt – Glauben, "Driving forces behind exiting"; Meert et al., "Farm household survival strategies"; Moreno-Pérez – Arnalte-Alegre – Ortiz-Miranda, "Breaking down the growth of family farms"; Lansink – Van den Berg – Huirne, "Analysis of strategic planning of Dutch pig farmers"; Smith – McElwee – Somerville, "Illegal diversification strategies"

38 McElwee, "Farmer's as Entrepreneurs", 187.

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## Local social groups and resource management strategies

In the 2000s, as a result of the above-mentioned changes, the internal local social, power and economic relations of the settlements in Tiszahát were determined by two trends:

1. There was the emergence and rise of a new, small number of owners and capitalists in the villages of the micro-region. This social stratum consisted of two groups: the former nomenklatura elites (state officials, middle and top managers of the former collective economy) or their direct descendants, and the new entrepreneurial economic elite (in the locals' conceptual categories: „smugglers", „mafiosos", „robbers", „big money people", „small-time kings"). In the early 2000s, these local elites successfully acquired most of the state property and assets (movable and immovable assets of the former collective economy) and locally available economic resources (land, real estate, money, infrastructure, etc.).

2. The other more characteristic process was the intense and persistent decline of the middle strata of local society (former collective workers living from industrial and agricultural wage labour), which led to the emergence of new and mass forms of poverty in the villages studied. In the villages of Tiszahát, as a result of the industrialisation that started in the 1970s, 30% of the population were already working as industrial wage labourers at the time of the change of regime. This social group was among the first to lose formal employment in the early 1990s. The population, which had been excluded from state employment and, after the privatisation of assets, left without any significant property or financial capital, was thus forced to develop alternative income-earning techniques (foreign employment, black work, smuggling and black-market trade, etc.), relatively independent of the state and formal labour markets, taking advantage of the physical proximity to the state border.

The two above-mentioned developments were accompanied by the institutionalisation of persistent economic, social and power inequalities in local society, which can be traced back to the privatisation of formerly state-owned agricultural land. At the beginning of the 2000s, a total of 1194,04 hectares of agricultural land (1576 ha) used by the former collective farm (the ‚Border Guard' collective farm) in the territory of the Tiszapéterfalva Municipal Council was distributed among 1889 inhabitants. This means that the average size of land per capita was only 0,6 ha. Thus, land privatisation – from the point of view of the population living in the settlement – essentially ended with the restoration of the pre-1948 land market, i.e. the former feudal ownership and land tenure structure. The new local inequalities created by the property transformation are illustrated by the fact that while in 1938 only three quarters of the population, i.e. 78.5%, were landless, or between 0-0.2 hectares of small and small landholders,[39] seven decades later, in 2012, 97.5% (!) owned less than 1 hectare of land (so-called „handkerchief plots"). In other words, the vast majority of the local population - between 0.24 and 0.67 ha - currently owns no land or land parcels other than individual family gardens and allotments.[40]

The situation is further complicated by the fact that the proportion of inactive and retired people among the owners of smaller areas (1-5 hectares) is significant.In 2018, cultivating 1 hectare of agricultural land - without plant protection and soil improvement works - cost approximately 8,800 hryvnias (88,000 HUF), while the average monthly pension in the settlement group was 1,300 hryvnias (13,000 HUF). The monthly income of the majority of one- or two-person pensioner households - in the field of agricultural production - thus did not allow them to finance almost any part of their work. This small landowner stratum, lacking the technical, mechanical and material resources necessary for agricul-

39 Szőllősy – Jánki – Thirring (eds.), *Az 1938. évi felvidéki nép-,* földbirtok- és állatösszeírás, 160-161.

40 In January 2018, the ploughing is UAH 2500/ha, disking UAH 2500/ha, sowing UAH 1300/ha, harvesting UAH 2500/ha.

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tural activity, usually leases or permanently sells[41] their existing land, which further increases the already high concentration of land ownership.

According to the land officer of the Mayor's Office in Tiszapéterfalva, the concentration of land in five villages is very high: in the group of municipalities with a population of about 5495 people, including informally rented land, only 37 people currently own or cultivate about 70% of the total arable land (4542 ha).

| **Land size** | **Number of owners** | | **Land size** | **Number of owners** | |
|---|---|---|---|---|---|
| | 2012 | | | 1938 | |
| 0 hectares (landless) | 0 | 0 | 0 hectares | 439 | 44,2 |
| 0<0.5 hectares | 1310 | 41 | 0<0.5 hectares | 170 | 17,1 |
| 0,5<1 hectare | 1813 | 56 | 0,5<2,8 hectares | 163 | 16,4 |
| Total: less than 1 hectare | 3123 | 97 | Total: under 2,8 ha | 772 | 77 |
| 1<5 hectares | 76 | 2,3 | 2,8<5,7 hectares | 85 | 9 |
| 5<10 hectares | 4 | 0,2 | 5,7<11,5 hectares | 57 | 6 |
| 10< | 0 | | 11,5< hectares | 77 | 8 |
| Total | 3203 | 100 | | 991 | 100 |

**Figure 2 Land size and land tenure in the settlements of Tiszahát (2012)[42]**

From this point of view, the process of property and economic transformation that unfolded in the context of the regime change can be interpreted as the last phase of the dismantling of the agrarian way of life after 1945. The privatisation that followed the regime change led to the disappearance of former family land holdings, to a change of function and to the creation of a new

41 In 2018, 1 hectare of arable land in the villages of Tiszahát cost USD 1,000, while the price per hectare of land not privatised or inherited (from ascendants) was only half of that amount, USD 500.

42 The data for 2012 are from the Mayor's Office in Tiszapéterfalva (table is self-edited). The data in the statistics are not strictly comparable, as different categories of farm sizes were defined in the 1938 and 2012 surveys. Nevertheless, the data in the table still provide a good illustration that the local inequalities that emerged in the early 2000s, i.e. the accumulation of capital by a new, narrow economic elite and the mass impoverishment of society, were of a significant scale in the longer (historical) term.

land tenure and ownership structure. The agriculturalisation of local society[43] has thus essentially been completed: agricultural production has now become the dominant economic strategy of a narrow entrepreneurial stratum in each of the micro-regions.

In the last two decades, the population living in the settlements of the Tiszahát has adapted to the new ownership and tenure relations with the help of very diverse economic strategies and adaptation techniques. As can be seen in Figure 3, a number of occupational groups have emerged in the local society, which have developed diverse micro-level resource management and land-use practices.[44]

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43 Kovách, *The countryside at the turn of the millennium,* 63.

44 Of course, the income structure of individual households is generally characterised by pluriactivity and a strong diversification of incomes and activities, which makes it difficult to clearly distinguish between occupations and economic strategies. Accordingly, the categories in the table are only ‚ideal types', since in reality, both economic strategies and expressive and instrumental actions, not only for different members of a household but also for different life stages of a single person, often form a very flexible, multi-level (multiplicative) system of production, consumption and market exchange of goods. In the municipalities studied, this results in hybrid local resource management policies. Borbély, "A diszfunkcionális ukrán nemzetállam informális alapjai"

**Figure 3 Resource management strategies and land use practices in the settlements of the Tiszahát (2020)**

| Occupational groups | Types of action | Land use practices | Market position |
|---|---|---|---|
| 1. Agricultural investors | Expressive actions.[45] „Economic policies" based on the acquisition and use of locally available resources (land, financial and human capital, labour) | Large-scale (industrialised) arable and greenhouse farming, modern machinery and landscape management practices | Consumption-driven communities, strong formal market integration of households (buying food from shops, emergence of quasi-urban consumption patterns of rural dwellers) |
| 2. Farmers | | | |
| 3. Post-traditional (semi) subsistence/productive farms | | Small scale (mixed: traditional-industrial) arable farming, small plot cultivation, hybrid agro-industrial (production technology, plant protection and care) knowledge and landscape management practices | |
| 4. Farmers producing food on the farm | | Limited, micro-level landscape use, household use of environmental resources to reduce expenditure (gardening, backyard vegetable and fruit growing) | |

45 Lin, Social Capital, 17–19.

| Occupational groups | Types of action | Land use practices | Market position |
|---|---|---|---|
| 5. ‚Quasi' farmers (own land but do not cultivate it or derive income from it) | | Total or partial abandonment of farmland: non-agricultural activities (formal labour markets, pensions, social benefits and other income transfers) | Consumption-driven communities, strong formal market integration of households (buying food from shops, emergence of quasi-urban consumption patterns of rural dwellers) |
| 6. Strategies based on the state border and foreign employment as an economic resource (mostly non-agricultural population):<br>„Fuel retailers" - petrol and diesel dealers,<br>„Truckers",<br>„ Sellers" (Sellers on both sides of the border),<br>„Pensioners in Hungary",<br>„Workers",<br>economic forced migrants:<br>a) agricultural seasonal workers<br>b) construction workers<br>c) domestic workers | Instrumental actions.<br>An „economic policy" aimed at acquiring resources available in the „external" (extra-village) space, through international formal and informal markets. | Leaving the local landscape (temporary, permanent or permanent), a physical and symbolic exit from the local biophysical environment | |

The everyday adaptive practices of these economic groups are characterised – predominantly – by so-called expressive actions: they are directed towards the acquisition and use of resources (land, financial and human capital, labour) available locally, within the physical space of a concrete settlement. According to the literature, this type of action also has a socially organising, stability-enhancing effect: these strategies create intensive internal (community) relations, i.e., homophilic interactions, within the local society, which is associated with a higher degree of social cohesion and integration.[46]

There is, however, a part of local society – less agrarian – whose economic actions are not primarily aimed at the acquisition of endogenous economic resources, but rather at the acquisition of external (exogenous) economic resources. In the micro-region under study, most of the strategies linked to the state border can be considered as such instrumental actions. Examples include, for example, the various techniques of cross-border trafficking and black-marketing (fuel smuggling, transport, market trading and dealing in everyday and durable consumer goods such as food, clothing, and technical products), pension and health tourism, and certain forms of labour migration (activities of construction workers, seasonal agricultural workers and domestic workers in Hungary). (I will not discuss these in detail here; these occupational groups and activities have already been described in a previous study.)[47] Here, I would only note that the spread and institutionalisation of these economic strategies - as they are usually organised around outward links from the local community (migration, cross-border trade, smuggling, etc.) and are usually characterised by the use of *bridging* social capital[48] - are more likely to lead to the polarisation of local society and, consequently, to the internal disintegration of the village community.

The common feature of these two „sub-communities" is that, although they have very different capacities and marketing strategies as producers, they are

46 Putnam, *Bowling Alone,* 22–24.

47 Borbély, "Informális gazdasági stratégiák az ukrán–magyar határvidéken"

48 Putnam, *Bowling Alone,* 22–24.; Putnam – Goss, *Democracies in Flux*, 9–12.

all strongly integrated into the formal market as consumers.[49] This means very simply that: the commodity-producing rural population buys most of the products and food consumed in the household from the shop, so they are now living as members of quasi-urban, consumption-driven rural communities. The most significant role in the institutionalisation, consolidation and spread of these new economic behaviours and patterns of life management in the settlements of the Tiszahát region – alongside the state-socialist modernisation that began in the 1970s – has undoubtedly been played by the phenomenon of international migration, and in particular *social* remittances, which has been developing over the last three decades.[50]In 2000, I conducted a household census covering the whole population in the centre of the micro-region, in Tiszapéterfalva, which I repeated in 2018, following similar criteria as before. Based on the data collected, in just two decades, the total local population (965 people as of 1 January 2000) has almost halved (52.8%), with a natural decrease of 19.6% and a migration loss of 27.4% (!). Within this figure, the share of international permanent emigrants, – mainly to Hungary –, was 17.5%, while domestic and regional migration accounted for 10.1%. A comparison of the data also shows that a further 7.2% of the local population were directly involved in international migration in some way, i.e. to varying degrees, but some were already living abroad: studying in Hungary (0.8%), working here legally or illegally (2.4%), or retired in Hungary where they own their own homes (4%).

49 Töhötöm Á. Szabó distinguishes several levels and forms of market integration (informal-formal, internal and external). Szabó Á., *Economy, behaviour and integration in a Transylvanian sub-region*.

50 The notion of „social remittances" was introduced into the academic discourse by an American sociologist, Peggy Levitt, in order to draw attention to the importance of social transfers, starting from a critique of the economic paradigm of migration phenomena. According to this approach, migrants are transnational *travellers* who exchange not only material goods but also novel ideas, knowledge practices, identities, cultural and social capital between sending and receiving countries. In this context, ‚social remittances', as the author sees it, are one of the main forms of cultural diffusion at local level, driven by migration, which can bring about radical changes in the internal structures of both societies, and sometimes also in their political and other institutions. Levitt, "Social Remittances" and Levitt, *The Transnational Villagers*.

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The gradual abandonment of agricultural production in the villages of Tiszahát, the spread of new („urbanized", „postmodern") patterns of livelihood strategies and consumption patterns in the context of the crisis and underdevelopment of the formal institutions of the Ukrainian state may contribute to the development of very serious local ecological crises. The following example is a good illustration of this.

An Austrian company, the so-called AVE waste management company, has been present in Transcarpathia since 2006, but in recent years (due to the saturation of storage sites, deteriorated state infrastructure, the poor state of roads and other reasons) it has stopped or limited the collection of household waste in several Transcarpathian municipalities. As a result, in the settlements of Tiszahát, there has been no selective and/or municipal waste collection organised by the state or private companies for many years.[51]

Household waste was collected unorganised and unprocessed by the population in and along the agricultural fields located in the far western outskirts of the village (in the immediate vicinity of the river Batar). The waste disposed of here (in an area with high groundwater levels and occasional light waterlogging and inland waterlogging) still poses serious environmental risks: for example, the pollutants from the waste can easily leach and seep into the soil.

51 This situation will be partially changed from 2021, when the Ukrainian administrative reform comes into force. The Tiszahát settlements were integrated into a larger sub-region of 15 villages (Akli, Aklihegy, Ujakli, Batár, Forgolány, Tiszapéterfalva, Tiszabökény, Fertősalmás, Nagypalád, Szőlősgyula, Tiszahetény, Hömlőc, Csepe, Csomafalva and Feketeardó). A new company („ВБС"=Виноградів без сміття) has been established in the Tiszapéterfalvi Sub-region, which currently collects and transports part of the household waste (only separately collected waste) from the villages of Tiszahát to a central site on a weekly basis.


**Picture 2. Changes in the surface cover of pasture areas (1. Nagypengő; 2. Kispengő; 3. Újfüzes; 4. Kismező) between 2006 and 2020. (The first satellite image shows the state of the areas on 7 May 2006, the second on 8 December 2020, source: Google Earth Pro.)**

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The situation is exacerbated by the fact that, like most other villages in Transcarpathia, there is no mains water or sewerage network in the villages of Tiszahát. Therefore, some families usually discharge household wastewater into septic tanks in the yard or garden. At the same time, the population meets its own drinking water needs from groundwater, usually through wells drilled or dug in individual homesteads. The poor quality, perceived or real contamination of drinking water thus have led to a higher proportion of families consuming bottled water, which (through PET bottles, flasks and other plastics) adds to the already significant annual household waste generation.

I would like to shed more light on the consequences of the new consumption and lifestyle patterns institutionalised by local adaptation techniques and informal economic strategies after the regime change by means of two practical examples.

1. One of these is related to the change of function of floodplain grasslands. Figure 2 shows four of the riverine pastures located in the north-eastern direction of the village („Nagypengő", „Kispengő", „Újfüzes", „Kismező"), which still played a very important economic role in the second half of the 20th century, during the first decade of collective (large-scale) farming after 1945 and individual, family-based private farming afterwards.[52]

52 In 2000, about 16.7 percent of the agricultural land (1,576 hectares) in the five villages of Tiszahát, owned by the „Border Guard" Ltd. as the successor of the former collective farm, was used as mowing (8.8 hectares) and pasture (254.9 hectares). For decades, since the collective farm was set up in 1948, the company has been engaged in large-scale arable farming on the majority of the land (1202,7 ha) and fruit growing on a smaller part (109,6 ha). Source of data: official documents in the private possession of the manager of „Border Guard" Ltd.

**Picture 3 Herd of villagers in the pasture of Tiszapétefalva. (First photo: 1980s, watering at the gas gate of the „Forest's End" pasture; second photo: the remaining herd at the „Forest's End" in 2020)**

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These floodplain and riparian pastures were previously used for extensive (extensive) livestock and grassland management (grazing on meadows and mowing along flood protection embankments and wooded groves), which has gradually declined over the past three decades. A comparison of the available statistics (1981 and 2021) shows this trend, i.e. the change in the role of beef and dairy cattle farming. As can be seen in Figure 4, while the number of pens/portas in the group of settlements under study has increased by about 38.2 % over the last four decades, the number of cattle kept on pastures on the outskirts of these villages has fallen dramatically by about 98.6 % (see Figure 3). This has obviously had a strong and rather complex impact not only on the landscape environment but also on the socio-cultural relationship with it.

| Village | Number of sheds/portals | | Cattle (head) | | |
|---|---|---|---|---|---|
| | 1980 | 2020 | 1980 | | 2020 |
| | | | a. privately owned | b. collectively owned | |
| Tiszapeterfalva | 436 | 716 | 146 | 5033 | 20 |
| Tivadarfalva | | | | | |
| Forgolány | 235 | 243 | 104 | | 10 |
| Tiszafarkasfalva | 493 | 650 | 188 | | 43 |
| Tiszabökény | | | | | |
| **Total** | 1164 | 1609 | 438 | 5033 | 73 |

**Figure 4. Changes in livestock (cattle numbers) in the settlements of Tiszahát (1981-2020)[53]**

53 In the table, the data for Tiszapéterfalva and Tivadar, and Tiszafarkasfalva and Tiszabökény (for the number of houses, portions and livestock) are combined, as these villages were under common administration during the socialist period. The source of the statistical data for the period before the regime change is NKHLR (1980): ibid. 17. For the Tiszahát settlements, I conducted the first household census in 2006, based on the municipality's farm books; the data of this household census were updated with new quantitative data in 2020.

1. One of these effects – the most striking – is ecological and related to natural succession. Over the last thirty years, the villages in the Tisza Valley have been experiencing a significant increase in the use of abandoned floodplain pastures – the so-called „floodplain pastures". New invasive woody and herbaceous plants (mainly pedunculate goatgrass, green shepherd's purse, Caucasian bear's-foot, serpentine thistle, Japanese knotweed) have been introduced in the abandoned pastures of the „Újfűzes" and „Kispengő", almost the entire area of the „Nagypengő", on the north-south periphery; Judaica, which has spread from public parks in the municipality) have appeared, leading to a very rapid and dramatic transformation of the former vegetation structure of the microsite.

2. The loss of biodiversity of these pasture and mowing areas (e.g. loss of grassland, meadows, changes in species and plant diversity) has been accompanied by another consequence. The areas regularly cleared and tended by the local kolkhozes in the state socialist era, and by the cow farmers in the post-socialist era, which were still engaged in large-scale (industrial) livestock farming, have become overgrown or reforested in the last decade as cattle farming has been abandoned, which has transformed the banks and the flow paths of the Tisza River: in some sections it has triggered erosion processes, in others it has created alluvial cones and natural barrages. Year after year, this causes serious flood protection problems in the settlements of the Tisza river basin, making effective flood protection difficult during the flood season.

3. Finally, we must also mention a socio-cultural consequence. It also indicates a change in the moral, ethical dimension of economic behaviour (and with it the social relationship with the environment). As the grazing and mowing areas mentioned above have been removed from the local economic resource system, the interconnectedness of people and landscape[54] has also changed significantly over the last few decades. As a result, floodplain grazing and mowing areas, previously imbued with everyday economic activities, and in this sense originally rich in meaning and memory (emotional), have been transformed

54 Beery – Wolf-Watz, "Nature To Place", 198-205.

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into peripheral spaces: „*non-places"*. These spaces are now often characterised, especially among the younger generation, by ‚illegibility', i.e. the disintegration of meanings and historical references. One indication of this is the phenomenon that, over the last thirty years, the names of the outlying and border areas of the village (place names) have increasingly disappeared from the collective consciousness and memory, and have been forgotten.[55] Or that certain forms of behaviour - once socially and legally forbidden and morally condemned - such as the neglect of floodplains and pastures, or their deliberate pollution (illegal dumping of household waste, the creation of rubbish dumps), have become increasingly accepted contemporary phenomena in the region under study (see picture 4).

**Picture 4 Household waste, illegal landfill at the edge of the „Forest End" grazing area (Tiszapéterfalva, 2020)**

55 Ákos Dömötör noted in relation to the socialist urbanisation of the peasant population commuting from the villages around Ózd («their relationship to the factory town») that the younger generation of wage workers› relationship with the traditional natural environment was loosened or substantially transformed «as a result of the increase in commuting to Ózd, the strengthening of industrial work and the significant change in lifestyle». All this, the author argues, has been accompanied by a marked impoverishment and erosion of knowledge of geographical names (everyday knowledge of dune and village names) in the villages of the Hangony Valley since the 1970s. Dömötör, "Az ipari termelés hatása a Hangony-völgyi emberre", 619.

The other empirical example of the transformation of the man/landscape relationship concerns forest use.

On the outskirts of the settlements of Tiszahát, south of the Batár River (along the road connecting Tiszapéterfalva with Nagypalád), the Satu Mare plain was once covered by a continuous forest, of which only a few small patches of unconnected forest (1. „Al-forest", 2. „Tyúkfarm-forest", 3. „Small forest" or „Majális forest", 4. „Large forest") have survived. Most of this mosaic area of 337 ha is covered by a mosaic of oak-hornbeam and a small part by ash-oak-hornbeam, where many elements of traditional forestry practices (firewood and timber farming, barrel and tool making,[56] forest grazing) survived until the mid-20th century. As these forest areas were of little agricultural value in the decades after 1945, due to the high water table and the peaty (ditch) soil, the area remained practically untouched until the change of regime. From the 1960s until 2008, the forest segments were used only for medical felling and were mainly used for recreation and hunting. As a result, the forest was home to a number of rare and valuable species of flora and fauna (e.g. Carpathian saffron, marsh lily or cotully (Fritillaria meleagris), meadow swordflower, black woodpecker, blue dove). (The other part of the same area, on the Hungarian side of the Ukrainian-Hungarian border, is currently a specially protected habitat, belonging to the Satu Mare-Bereg Landscape Protection Area, established in 1982.) However, since the mid-2000s, the situation has changed: a large part of the forest area has disappeared or been destroyed due to a combination of negative factors:

1. Due to global climate change, the groundwater level in the area is decreasing and the nearby river (Batár) is being controlled (dredging, siltation), causing the marshy parts of the forest to dry out. The drought and mild winters have led

56 Already during the time of Maria Theresa's rent control, the villages of the so-called Paladság (Nagypalád, Kispalád, Botpalád) had a relatively significant wagon and wheel manufacturing industry, thanks to the hardwood forests located on the outskirts of the settlements. According to the census of Nagypalád of 3 November 1772, the village „makes whole Chariots, Chariot Wheels, Wheel Cages and Zsendely, and distracts them to Szatthmar and Debreczen, and then to the local market." The text is quoted in Kávássy, "KÜVŐ (kerek-vagy kerékküvő)", 86-87.

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to an increase in deciduous forest pest species (oak wilt, American knotweed), which have caused huge losses in the forest stand.

2. The district state forestry responsible for the area – not only in the area that is susceptible to felling, but also in most of the affected area – started felling in 2008. The end-use harvesting was carried out during the growing season, and the large machines and trucks used to remove the timber destroyed a significant part of the grassland and undergrowth on the wet, wet ground, leading to the disappearance of the original vegetation (e.g. 90% of the Carpathian saffron population, the entire population of the marsh lily) and the mass emergence of new, disturbance-tolerant and invasive species.

3. The state forestry authority did not carry out the reforestation or replanting of the harvested areas, or did so only very inexpertly, for financial reasons; the lack of soil preparation, the poor quality of cuttings, etc., meant that the seedlings planted were not retained. Today, 90% of the cleared forest areas are covered with shrubs and bushes (hawthorn, black locust and Blackthorn), where, in places that are more easily accessible by car (e.g. the „Majal forest", the „Chicken farm forest"), the population has in recent years set up illegal rubbish dumps and deposited tonnes of household waste (Fig. 5).

To sum up, in the Ukrainian terrain under study - in the years of post-socialist transition – informal techniques and resource management strategies based on solidarity and interpersonal cooperation have been developed for decades to counteract the dysfunctional functioning of the state. These alternative resource management systems, while enabling many social groups in border communities to make a living in everyday life, have also (in parallel) institutionalised the unequal accumulation and distribution of wealth within local communities.

In the Transcarpathian Hungarian settlements studied, these specificities have created hierarchical adaptation systems over the past three decades in which adaptation to economic change usually overrides ecological adaptation and related conservation concerns.

Based on the above, one of the systemic properties of the adaptation strategies of the settlements in the Tiszahát region can be described as scale-dependent.[57] This means that a property of a resource management technique observed at one scale (e.g. its function and ecological impact) changes at another scale. By this, I mean that informal adaptive-strategic behaviours, i.e. those operated through extensive interpersonal, family, kinship networks, are productive in many cases at the individual household (micro) level, providing a relatively secure livelihood for the population living in border settlements despite the prolonged economic crisis in Ukraine over several decades. In this way, they are to some extent able to effectively compensate for the inefficiency (‚weakness') and dysfunction of state institutions in the peripheral border areas, which are located far from the more developed centre or core areas. For example, by informal simulation of markets and capital (informal labour markets, job creation, institutionalisation of informal market exchanges, conversion of contact or network capital into money capital, etc.) they can mitigate local social and economic tensions resulting from the unequal and inadequate (state) redistribution of still available resources. On the other hand, however, it can also be seen that these same informal economic strategies for everyday livelihoods and survival can often lead to explicitly negative outcomes at another scale, for example at the macro level – from the perspective of the larger community or the local socio-ecological system. By overexploiting available natural resources (pollution of water, streams, pastures and forests, abandonment of agricultural production, processes of landscape succession and degradation), they reinforce local community maladaptation; they act as institutions that promote the erosion of ecological knowledge, the loss of the constitutive role of landscape in local identity, and the loss of the reactive use of landscape resources. From this perspective, in the longer term, informal network systems may increase the vulnerability and fragility of the Ukrainian-Hungarian border peripheries and the population living there.[58]

57 Moerlein – Carothers, "Total environment of change", 10.

58 Engle, "Adaptive capacity and its assessment."

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**Picture 5 Household waste at the site of a clear-cut forest area**

(Source: photos by István Matúz)

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