

# Наукові повідомлення

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## RETHINKING THE ROLE OF LAND PRIVATIZATION IN PERI-URBAN TRANSFORMATIONS IN UKRAINE: THE CASE STUDY OF SOKILNYKY, LVIV OBLAST

The purpose of the study is to find out how the distribution and further privatization of land have affected the changes of peri-urban villages in Ukraine since the 1990s, based on the case of the village of Sokilnyky near Lviv. After the collapse of the Soviet Union and the redirection of Ukraine's economy from a planned centralized to a market-oriented crony-capitalism, the peri-urban areas of largest cities have become complex, dynamic and contradictory spaces with drastic changes in demography, housing, infrastructure, and land use. The shift of land policy in Ukraine in the 1990s with the weakening of planning regulations and the way land was distributed are the main triggers of how peri-urban areas have been transforming.

The analysis of changes in land ownership, household farming/agriculture, detached houses' number and size, household income and urban morphology (street network, location of houses and commercial units) in Sokilnyky since 1990s reveals three key consequences of privatization and commodification of land in post-socialist cities' environs: a) land privatization provided the opportunity for small-scale household farming/agriculture for one class of people as a survival strategy, especially during the economic crisis of the 1990s, and a place for housing and commercial construction for another, causing the eclectic nature of peri-urban settlements with mixing different classes of people with different lifestyles; b) land distribution and privatization were crucial in the emergence of chaotic, fragmented and ad-hoc housing and commercial units, since land division into plots in the 1990s preceded urban planning and master plan development; c) privatization has also created a condition for biased land-development for profit, resulting in shrinkage of public spaces, communal lands and green open spaces.

The study is based on statistics from local government, historical map analysis, informal interviews/personal communication with urban planners and officials, and fieldwork visual analysis.

**Keywords:** post-socialist transformations, peri-urban area, housing, urban morphology, land-policy, privatization, urban planning, critical social theory.

### **Роман Лозинський. ПЕРЕОСМИСЛЕННЯ РОЛІ ПРИВАТИЗАЦІЇ ЗЕМЛІ У ТРАНСФОРМАЦІЯХ ПРИМІСЬКИХ ТЕРИТОРІЙ В УКРАЇНІ: КЕЙС-СТАДІ СЕЛА СОКІЛЬНИКИ, ЛЬВІВСЬКА ОБЛАСТЬ**

Метою дослідження є з'ясувати, як розподіл та подальша приватизація земель впливають на зміни приміських сіл України з 1990-х років на основі кейс-стаді села Сокільники під Львовом. Після розпаду Радянського Союзу та перенаправлення економіки України з планової централізованої до орієнтованого на ринок кроні-капіталізму приміські території найбільших міст стали складними, динамічними та суперечливими просторами із різкими змінами в демографії, житлі, інфраструктурі і землекористуванні. Зміна земельної політики в Україні у 1990-х роках із ослабленням планувальних регулювань та те, як відбувався розподіл землі, є основними тригерами, як приміські території трансформуються.

Аналіз змін у власності на землю, особистому селянському господарстві, кількості та розміру садибних будинків, доходах домогосподарств та морфології поселення (вулична мережа, розташування будинків та комерційних закладів) у Сокільниках з 1990-х років дозволяє виявити три ключові наслідки приватизації та комодифікація земель в околицях пост-соціалістичних міст: а) приватизація землі надала можливості для ведення особистого селянського господарства невеликого масштабу для одного класу людей як стратегія виживання, особливо під час економічної кризи в 90-х роках, та місце для житлового будівництва та комерційних об'єктів – для іншого, що спричинило еkleктичний характер приміських поселень із змішанням різних класів людей із різними способами життя; б) розподіл та приватизація земель мали вирішальне значення для виникнення хаотичних, роздроблених та ситуативних житлових та комерційних об'єктів, оскільки поділ землі на ділянки у 1990-х роках передував містобудівному плануванню та розробленню генерального плану; в) приватизація також створила умови упередженого розпорядження землею задля прибутку, в результаті чого скорочуються громадські простори, комунальні землі та зелені відкриті простори.

Дослідження базується на статистиці з місцевої адміністрації, аналізі історичних карт, неформальних інтерв'ю/особистому спілкуванні з планувальниками та посадовими особами, а також на польовому візуальному аналізі.

**Ключові слова:** постсоціалістичні трансформації, приміська територія, житло, морфологія поселення, земельна політика, приватизація, міське планування, критична соціальна теорія.

**Роман Лозинский. ПЕРЕОСМЫСЛЕНИЕ РОЛИ ПРИВАТИЗАЦИИ ЗЕМЛИ В ТРАНСФОРМАЦИЯХ ПРИГОРОДНЫХ ТЕРРИТОРИЙ В УКРАИНЕ: КЕЙС-СТАДИ СЕЛА СОКОЛЬНИКИ, ЛЬВОВСКАЯ ОБЛАСТЬ**

Целью исследования является выяснить, как распределение и дальнейшая приватизация земель влияют на изменения пригородных сел Украины с 1990-х годов на основе кейс-стади села Сокольники под Львовом. После распада Советского Союза и перенаправления экономики Украины с плановой централизованной к ориентированного на рынок Croni-капитализма пригородные территории крупнейших городов стали сложными, динамичными и противоречивыми пространствами с резкими изменениями в демографии, жилье, инфраструктуре и землепользовании. Изменение земельной политики в Украине в 1990-х годах с ослаблением планировочных регулировок и то, как происходило распределение земли, являются основными триггерами, как пригородные территории трансформируются.

Анализ изменений в собственности на землю, личном крестьянском хозяйстве, количества и размера усадебных домов, доходе домохозяйств и морфологии поселения (уличная сеть, расположение домов и коммерческих заведений) в Сокольниках с 1990-х годов позволяет выявить три ключевые последствия приватизации и комодификация земель в окрестностях постсоциалистических городов: а) приватизация земли предоставила возможности для ведения личного крестьянского хозяйства небольшого масштаба для одного класса людей как стратегия выживания, особенно во время экономического кризиса в 90-х годах, и место для жилищного строительства и коммерческих объектов – для другого, повлекшее эклектичный характер пригородных поселений со смешением различных классов людей с разными образами жизни; б) распределение и приватизация земель имели решающее значение для возникновения хаотических, раздробленных и ситуативных жилых и коммерческих объектов, поскольку разделение земли на участки в 1990-х годах предшествовал градостроительному планированию и разработке генерального плана; в) приватизация также создала условия предвзятого распоряжения землей для прибыли в результате чего сокращаются общественные пространства, коммунальные земли и зеленые открытые пространства.

Исследование базируется на статистике из местной администрации, анализе исторических карт, неформальных интервью/личном общении с планировщиками и должностными лицами, а также на полевом визуальном анализе.

**Ключевые слова:** постсоциалистические трансформации, пригородная территория, жилье, морфология поселения, земельная политика, приватизация, городское планирование, критическая социальная теория.

**Introduction.** After the collapse of the Soviet Union in 1991, Central and Eastern European cities experienced significant changes in demography, land-use, housing, and infrastructure. The cities' peri-urban areas<sup>1</sup> became places of especially drastic transformations, exceeding those in Western Europe to the extent that some authors have called it a post-socialist suburban revolution [27]. The peri-urban transformations reflect new political, socio-economic as well as cultural conditions after the collapse of the socialist system [11]. Central and Eastern European post-socialist countries, including Ukraine, underwent redirection of their economies to neoliberalism – limited control of the government over a new market economy with consequent privatization of land, real estate, and means of production that were previously owned by the state or in communal use. However, in post-socialist countries, especially in former Soviet countries, capitalism took different than in Western countries specific form known as Crony capitalism with intense nepotism and corruption [3].

**Problem statement and purpose of the study.** Privatization is a key economic, political, and cultural phenomenon in post-socialist countries that determined all other social aspects of life [11; 27]. The privatization process refers to the changes in ownership status that happened after the collapse of the Soviet Union and the establishment of private rights, usually in a speculative way, over the means of production, real estate, industry, manufacture, retail, etc. [11]. In the research I focus on privatization of land and how it has affected the changes of peri-urban villages in Ukraine.

The purpose of the study is to understand how the distribution and further privatization of land have affected peri-urban villages in Ukraine since the 1990s. The research question is – how land distribution and privatization have affected peri-urban villages in largest Ukrainian cities since the 1990s? Answering this question and finding new insights will assist urban planners, officials and residents to better understand the depth of the impact of land distribution on present peri-urban areas and how different actors have been involved and are responsible for consequences.

The research is based on case study of the Sokilnyky village in the Lviv outskirts in Ukraine, which is considered as a typical high-demand settlement of a large city (Lviv has almost 730 000 residents). The research with focus on one case is determined by the nature of research question and methodology that requires deep analysis of how land distribution impacted on peri-urban village and especially on its urban morphology. In order to find out answer for research question I firstly focus on how landownership, household farming/agriculture<sup>2</sup>, detached houses' number and size, household income and urban morphology have been changing in Sokilnyky since the 1990s, and then on finding relations between distribution of land and urban morphology with implementation of visual landscape and historical maps analysis. In order to explain the consequences of land privatization in peri-urban villages in new social conditions after the collapse of the Soviet Union, I link empirical findings with critical social theory, and rely on structuralism as methodological framework for conceptual analysis (more details in Research Design).

<sup>1</sup> In the research peri-urban area is used as term with locational meaning and refers to the environs of cities – that is area that surrounds city. The concept of suburb is not used purposively as it is debating in regard to its meaning as suburb has different understandings in different social, geographical and temporal contexts and usually with connotation of American type of suburbs with domination of single-family houses.

<sup>2</sup> In the research, household farming/agriculture refers to growing vegetables (mainly potatoes) on small land plots (in the case of Sokilnyky it near 10 - 12 ares) usually for the family needs or/and for the sale in the city.

**Literature review.** In Ukrainian academia the focus on the question how distribution and privatization of land have been affecting peri-urban areas is limited with predominant analysis of demography and housing. The main source of data implemented in analysis is statistics on the *raion* level or cities-satellites as major indicators are available only on this scale, and only few publications have focus on under *raion* level. Even though changes in land policy are mentioned in the works, the consequences of distribution and privatization of land in new social conditions is not provided. Furthermore, administrative *raion* as a scale for a research provides limited chance of deep consideration of how land distribution and privatization impacted on peri-urban transformations. In addition, the changes in household farming/agriculture, size of detached houses, households' income and how urban morphology in peri-urban villages has changed after 1991 was not considered yet.

Peri-urban transformations in demography and housing on the scale of *raion* or cities satellites are considered with focus on: former dacha settlements around Kyiv and Moscow [25]; demography changes in *raions* around cities over 40 000 [6]; ratio of Kherson population to the overall agglomeration population since 1979 [19]. There are also studies with analysis of housing, commercial and infrastructure units' changes with focus on high-rise housing and new type of housing - cottages (in Ukraine the term is usually used to complexes that consist of both single family detached houses with unified architecture style or multifamily low rise linear houses). Particularly researcher analyze growth of new housing (namely, ratio of new housing area per 1000 inhabitants) and its location patterns in broader scale in relation to main highways and natural landscape qualities, and provide typology of different cities' outskirts regarding to types of houses and abstractly defined "way of life" (urban, rural, suburban and "second home") [20; 21; 24].

Another studies look at the changing demand for land in space-time dimension (2000-2011 in 5, 10, 15 and 20 km. zones from the geographical center of the city) in the case of Ivano-Frankivsk and Kherson, where the results showed a decrease in the number of land for sales and its price from the city, and rising prices since 2005 and its decrease in the 2008, the year of economic crisis; decrease of arable land from the city and increase of pasture and abandoned agriculture land [34; 35; 19]. In one more work about housing in peri-urban areas is concluded - new high-rise housing in peri-urban villages infringe local architecture environment of low-rise detached houses [4]. However, except for the height of the houses nothing else is considered, for instance the location of new buildings in the urban fabric of settlements and how they are integrated into existing morphology. Ukrainian cultural anthropologists recently started to

study social interaction between new residents in new residential areas in peri-urban villages with the focus on collaboration, informal practices, and interaction with local government and developers [2, 27].

Roman Cybriwsky, American urban geographer with Ukrainian origin, in his paper about land-use changes on Dnipro riverbanks within Kyiv shows how land started to be part of new post-socialist conditions of wild capitalism, and involved in the rise of social inequality in the form of shrinkage of public and green spaces and access to the riverfront what as I will show is widely present in peri-urban area as well [5].

Thus, literature review shows there are studies with focus on demography and housing changes. However, analysis of household farming/agriculture, household income, size of detached houses and morphological changes inside settlements, and how privatization of land has impacted on it are missed. In Ukrainian geography there is an old tradition of urban morphology and ekistics research, for instance Volodymyr Kubijovych' and Mykola Kulycky' analysis of the settlements' location, shape, street network and houses location, and even houses building materials in the work "Geography of Ukrainian and Neighboring Lands" first published in 1938 [16].

**Research design, methods and data.** In order to find answer for the research question - how the distribution and privatization of land have affected peri-urban villages in Ukraine, I firstly analyze changes in land ownership, household farming/agriculture, houses' number and size, household income and urban morphology in Sokilnyky after the collapse of the Soviet Union.

The empirical findings are considered with relying on structuralism as methodological framework to understand why peri-urban areas have been changing in particular way and what broader social processes it reflects. Structuralism as a philosophy and methodology understands social (and spatial) world and all phenomenon, events and practices as determined by underlying social structures or system of relations [8; 14; 31]. Structuralism as a methodological framework is used in the research for conceptual analysis of empirical findings, namely to "uncover the structures and mechanisms behind events" [7]. In the case of the research the social structure is specific post-socialist form of capitalism as system of relations with nepotism and corruption inscribed in the land policy changes and in the way land was distributed and privatized.

I implement a case study because the research is intensive (not extensive<sup>3</sup>) regarding what is induced by the type of main research question with a focus on how processes work, namely how land-policy changes resulting in distribution and privatization of land affected peri-urban areas.

<sup>3</sup> "Extensive research requires a large sample of observations and seeks to identify patterns in the phenomenon of interest, often through the use of inferential statistics or numerical analysis. While this approach may identify general trends, it has relatively weak explanatory power because neither correlation nor consistent association demonstrates causation. In contrast, the objective of intensive research is to determine how processes operate to produce an observed pattern. This approach typically relies on smaller samples, such as case studies, and may involve qualitative methods to characterize social processes or detailed measurements to uncover specific physical processes" [7].

As the research is intensive, idiographic, and partly with the use of qualitative methods (landscape visual analysis) and thus provides a different kind of questioning and insight when compared to extensive and quantitative [32], I do not prove a representative case by quantitative data. One more reason why I chose a case study of the Lviv peri-urban village of Sokilnyky was accessibility, which is important when data is available only in local administrations and there is a need of fieldwork. There are other peri-urban settlements in Ukraine that would be much brighter examples of drastic transformations what is especially true in attractive areas near water bodies or forests along the Dnipro River near Kyiv or the seashore in Odessa.

The data used in analysis is on the scale of village (*silrada*) level from the *raion* statistics department in Pustomyty, Lviv *oblast*. Namely information about Sokilnyky is available for 1992, 1996, 2001, 2005, and 2014. Statistics used by me refers to: quantity of registered residents, where they work (in settlement or outside), quantity of livestock kept by residents, quantity of registered houses, its size and detached houses roof material considered as indirect indicator of household income. As a tool to reveal changes in urban morphology, I used Google Earth as it allowed to create an image overlay of historical maps with small locational error and compare them with a transparency option. Particularly, I

analyzed three historical map from 1931, 1971, and 1984/89 that are detailed enough (scales 1: 25 000, 1: 25 000, 1: 50 000 respectively) to trace changes in street network and house location. The result of the historical map and Google Earth analysis is the map that shows Sokilnyky residential areas growing through time and a description of morphology changes (Fig. 4).

The aim of visual landscape analysis was to find “spatial clues, site-specific interrelationships, and insights” [9] related to consequences of land distribution and privatization on settlement morphology that is how formation of land plots impacted street network and houses location. The landscape visual analysis has unclear line between collecting and analyzing parts, and the process of collecting data and analyzing is blurred [9].

**Sokilnyky as a case study.** Sokilnyky officially is one of many villages around Lviv, and it is part of the Pustomytivskiyi district (“*rayon*” or “*raion*” – the second level of four administration divisions of Ukraine). Sokilnyky is an independent entity from the Lviv city municipality (unlike Vynnyky city and urban-type settlements Rudne and Bruchovychi that are under jurisdiction of the Lviv municipality). Sokilnyky has a common administrative border with Lviv. The distance from Sokilnyky to Lviv downtown is 7 km. (4.35 miles) to 11 km. (6.84 miles) from different part of the settlement (Figure 1).

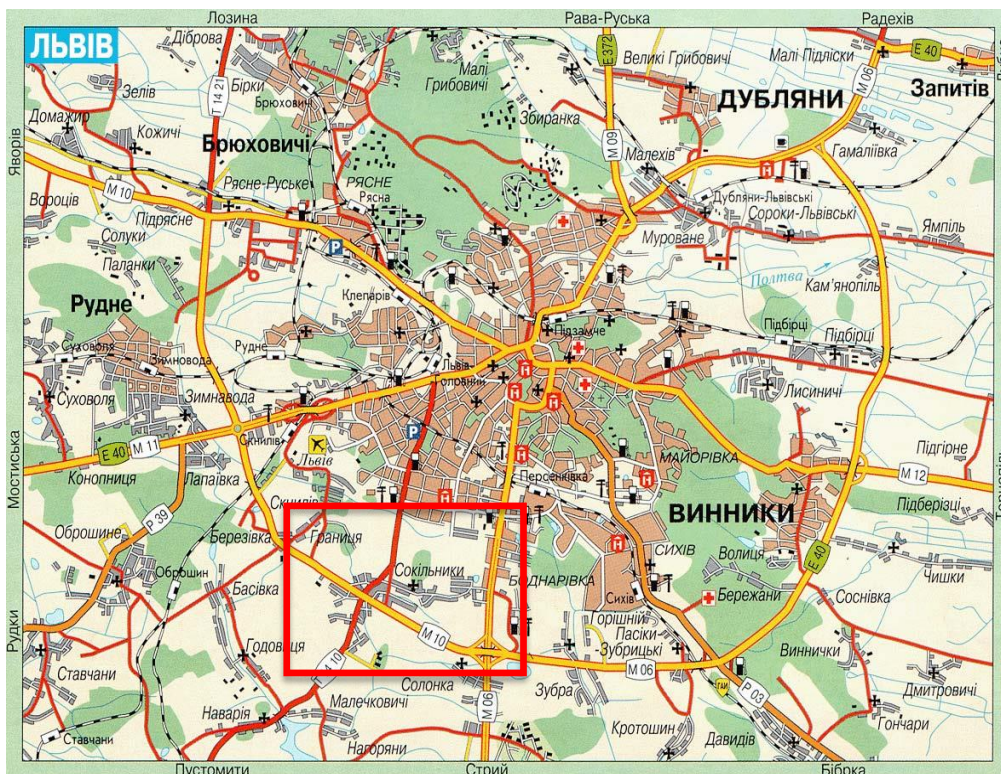


Fig. 1. Sokilnyky on the map of Lviv with its suburbs (in red square).

Source: Atlas Avtodorih Ukrainy [Ukraine Road Atlas]

Although Sokilnyky is officially defined as a rural settlement and has its own village council, *silska rada*, it depends on economic and social relations with Lviv. There are 6 337 inhabitants in Sokilnyky, and from 2 353 working residents 2 034 have their jobs in Lviv

(Pustomyty Statistic Department) and commute to the city mainly by private transport and less by public. However, the statistics does not show the number of people who live in Sokilnyky unregistered and local officials name number closer to 10 000 residents. Sokilnyky as a



settlement close to Lviv experienced an increase of population while the Ukraine countryside has a decline of population (Ukrainian Census). The growth of population is 15.6% since 1992 and this number shows only officially registered residents. Out of 2 353 employed people, almost all (93.24%) were working outside Sokilnyky in Lviv (Pustomyty Statistic Department) as to 2014.

#### **Post-socialist transformations in Sokilnyky.**

**Land-ownership.** In the Soviet time, the boundary of the city and the village was clear. It was a line between agrarian and industrial development plans within the framework of a plan-command economy under the strict control of the communist party [12]. The literature about Soviet adjacent settlement to cities, is limited, however as the line between rural and urban areas was divided clearly, it is possible to assume that socialist “suburbs”, that is adjacent villages, were overall as all other rural areas throughout socialist countries, that is with kolhosp or radhosp (kolkhoz and sovkhos in Russian) - collective type of farms run by cooperative or by state in latter case, as dominant agricultural production, but with specialization of providing food for the need of adjacent city. For the most part there were state farms, because it was possible to better control production. There was one more difference - the existence of cottages – dachas, places for gardening or recreation with seasonal housing provided for the urban working class [17]. Usually they were located close to cities and connected by public transport including railroads or buses.

The boundary between the city and the countryside started rapidly blurring from the late 1970s [27]. Due to lack of food supply and housing in the cities, the party leadership handed over to workers more dachas, land plots for farming and housing construction [17]. With the growth of wages in industry (in comparison with agriculture) and the increase in the technical level of agriculture, more and more people from adjacent villages in the 1970-1980s started to work in the city's industry.

During the Soviet time agricultural land around Sokilnyky residential area was fully used for cultivation. In the 1940s in Sokilnyky three kolkhozes existed as part of a centralized communist party regional plan system that were joined into one in 1953 and named “Peremoha” (“Victory”) [13]. Its specialization was a provision of Lviv by vegetables, fruits, and milk. In 1958 kolkhozes were transformed into radhoz that later was almost fully dislocated to the nearest village Solonka. One existing brigade in Sokilnyky became part of radhosp “Lvivskiyi” in neighboring village Zubra. At the end of the 1980s, the Sokilnyky section of Zubra radhosp was almost not functioning [13]. Part of Sokilnyky area was considered by communist authority as a vacant place for housing of a small number of the working class of Lviv plants (which had limited housing opportunities inside the city for new workers of growing plants) while providing land for single family housing construction in 1970s [13]. Thus, in Sokilnyky in the end of 1980s small part of the population were involved in agriculture and significant others – in different type of industry in Lviv.

After the collapse of the Soviet Union, and when Ukraine got its independence, agricultural land of radhosp have been divided in 1990s between former

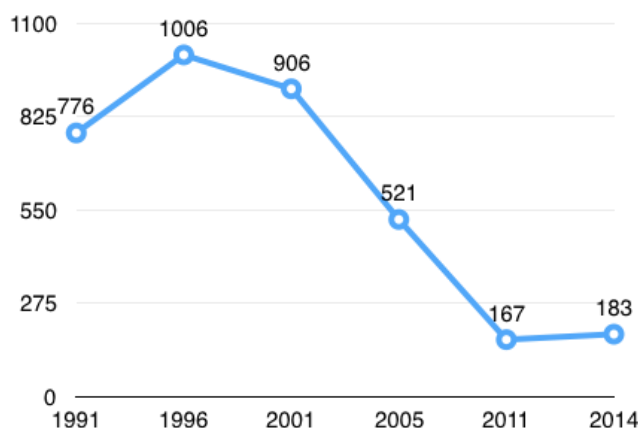
radhosp workers and employee of social state/public sectors (process known in Ukraine as *pauvannia*). This land is prohibited for privatization and selling since 2001 known in Ukraine as land moratorium. Land obtained during *pauvannia* hold juridical agriculture function status for the use of agriculture cooperatives (in case when residents would like to keep farming in cooperative) or for the need of self-farming (in case if someone would like to leave cooperative) [33]. There were other steps of vacant land distribution between Sokilnyky residents (not only by them, and not always in a legal way) in second half of 1990s and later decades parceled into small pieces, mostly 10 to 12 ares for the purpose of small scale family self-farming or houses construction. The land for individual agriculture use (*osobyste selianske hospodarstvo*) was possible to privatize as part of all-Ukrainian shift in land-policy also with opportunity to change functional juridical status for housing or commercial construction [33].

In the 1990s, land was considered not as a commodity, but as a means of subsistence. So the land distribution was quieter. Often this process depended on subjective factors, such as the personal views and attitudes of the village head and the deputies. At this time, mostly everyone received land plot for agriculture or house construction. However, over time, especially after the introduction of the land market in Ukraine, officials and the population began to view land as an easy way to make money. In villages close to major cities where demand for land and, consequently, its price are high, land distribution and privatization have become speculative (raiding, non transparent distribution and privatization conditions). In order to raise the value of land, the status of land – *osobyste selianske hospodarstvo* was changed from agrarian use into housing or commercial construction. The land status was changed by local officials with the request to central national government Verkhovna Rada in the capital Kyiv. Consequently, land used previously as common pasturage for cows, goats, and sheep was parceled in the end of 2000s as well. The village council was especially enthusiastic of the process of distribution of land (as this process creates a situation where corruption and bribes are common) and local officials were proud to inform me (in personal communication) that there is practically no land owned by village council any more. That would cause problems for places of public use in future. The privatization process of former agrarian land, owned by the state or community during the Soviet era, in the post-socialist conditions of nepotism and corruption, created social inequality and privilege as some strata of people got benefits, while others received less benefits or nothing at all.

**Household farming/agriculture.** During the economic crisis in the 1990s, farming among residents was more common than in previous and following years (Figure 2). After 1996, and especially after 2001, the number of livestock shrunk by almost half by 2005, and in 2011 it was only 16.6 percent of the 1996 number (Pustomyty Statistic Department). After 2011 the number of livestock grew slightly again. Cultivation areas shrunk to a lesser extent. Farming is practicing by older residents and also by younger people with ecological consciousness. However, because of the size of each

field/cultivating area, there is reason to consider farming as supplemental, not as a hobby, as homegrown vegetables, such as potatoes, are recourse to save money. Thus, the economic factor of growing their own vegetables was always relevant for Ukrainians, especially during the crisis in the 1990s, and more recently after events of 2013/2014 when the Ukrainian currency decreased three times.

Livestock and activities related to keeping them



**Fig. 2. Livestock number changes in Sokilnyky after 1991**

Source: Pustomyty Statistic Department

**Housing.** The number of houses in Sokilnyky has grown by 40.12 percent since 1992 with significant increases of size (222.94%), which we can see in Table 1 (Pustomyty Statistic Department). The average area of an apartment is 154 square meters in 2014, compared to 67 square meters in 1992 (Pustomyty Statistic Department). From all apartments 99.19% are privately owned as to 2014. In 2014 the number of apartments in Sokilnyky was 2 086 and the number of all houses was 2029

played a certain role in the settlement planning of Sokilnyky in the 1990s as cattle owners were united and participated in keeping pastures available for the public [18]. However, in 2014 there were only 53 cattle in Sokilnyky in comparison to 492 in 2001 (Pustomyty Statistic Department). With the diminishing of this activity, the area of pastures shrunk by changing the land status and granting it for other agricultural uses or house construction.

— that is houses are predominantly one family items (not duplexes or triplexes). In Sokilnyky we can observe the predominant growth of detached type of houses, and only several linear low-rise cottages and multi-floor type of housing on outskirts of settlement. The statistics do not show a number of not registered houses that could be significant. In Ukraine electricity, water and gas services do not require official registration of house.

Table 1

**Housing changes in Sokilnyky since 1992**

Year	Number of houses and apartments	Area of all houses, thousands square meters	Area of houses, thousands square feet
1992	1448; 1506	96 990	1 043 991
1996	1238; 1239	109 290	1 176 387
2005	1719; 1798	239 780	2 580 970
2014	2029; 2086	313 220	3 371 472
Change, 1992-2014	+40.12%; 38.51%	+222.94%	+222.94%

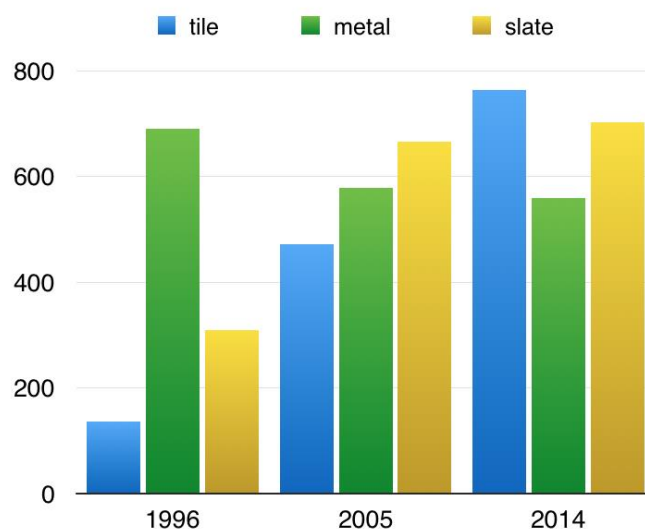
Source: Pustomyty Statistic Department

**Household income.** The information about residents' income is not available in Ukraine, so I check out the roof construction material, what is available in Pustomyty Statistic Department, as indirect indicator of household wealth. In Ukraine the most expensive mate-

rial during the whole 25 years after the collapse of the Soviet Union is tile, then metal, and the cheapest one is slate. In 2014 there were 703 roofs made by slate, 559 by metal, and 764 by tile (Pustomyty Statistic Department). The change of roof material shows what economic clas-

ses of people grew in Sokilnyky after the collapse of the Soviet Union. In 1996 there were 310 roofs made by slate, 690 by metal, and 136 by tile. In 2005: 666 by slate, 578 by metal, and 472 by tile (Figure 3). As we see, the number of houses with tile roofs grew significantly since 1996 and especially after 2005. By 2014 the number of tile roofs became even larger, while the number of slate roofs did not increase significantly, and the number of metal roofs decreased. Fences and gates can be indicators of income as well, however there are no statistics about them, and fences do not always represent

the real income of households as they have a more festive function and people invest more money than they can spend on them in reality. Roofs, which are not as easily seen as fences or gates, indicate household income more accurately. However, it should be taken into account that information about roof materials does not show specific numbers of how many house roofs were constructed by incoming new residents and how many were reconstructed from older and cheaper materials into more expensive materials by long-term residents.



**Fig. 3. Changes in houses roof material as representation of residents' income in Sokilnyky**

Source: Pustomyty Statistic Department

**Sokilnyky morphology changes.** With the use of historical maps and visual landscape analysis I examine how old and new street network look (linear, grid or cul-de-sac), how are houses located regarding the street, and where are commercial unites located - are they fragmented or incorporated into residential areas? The results of the historical map and Google Earth analyses are that the map (Fig. 4) shows the growing of residential areas of Sokilnyky throughout time, and the morphology changes in street network.

After the collapse of the Soviet Union, 22 new streets emerged (29 streets in 1996 and 51 streets in 2014, Pustomyty Statistic Department). As we can see from Figure 4, Sokilnyky urban morphology is not so diverse, though it was formed during a few centuries with different historical and social contexts. Two types of streets exist: vernacular/traditional, determined by orography and access to water, and modern greed and semi-greed street network emerging in 1960s and later. The houses location is different by time of construction and mostly depends on how land was distributed to new residents.

The oldest residential area of Sokilnyky (highlighted in red on the map in Figure 4) that generally follows the settlement morphology from the 14th century [13] is located on a slope of a valley, with the lowest part bogged with several small lakes. This residential area was planned in such a way that houses were located irregularly near the street, and backyards and fields were

located in the opposite direction [13]. Currently, this area has the highest density of houses. It was planned irregularly that give the opportunity to build new houses in gardening areas what happened in the end of 20th century. Refining of old houses with the creation of second floors and garages was also common. In addition, agriculture areas (for *osobyste selianske hospodarstvo*) close to residential area were for sale by owners and new houses were constructed.

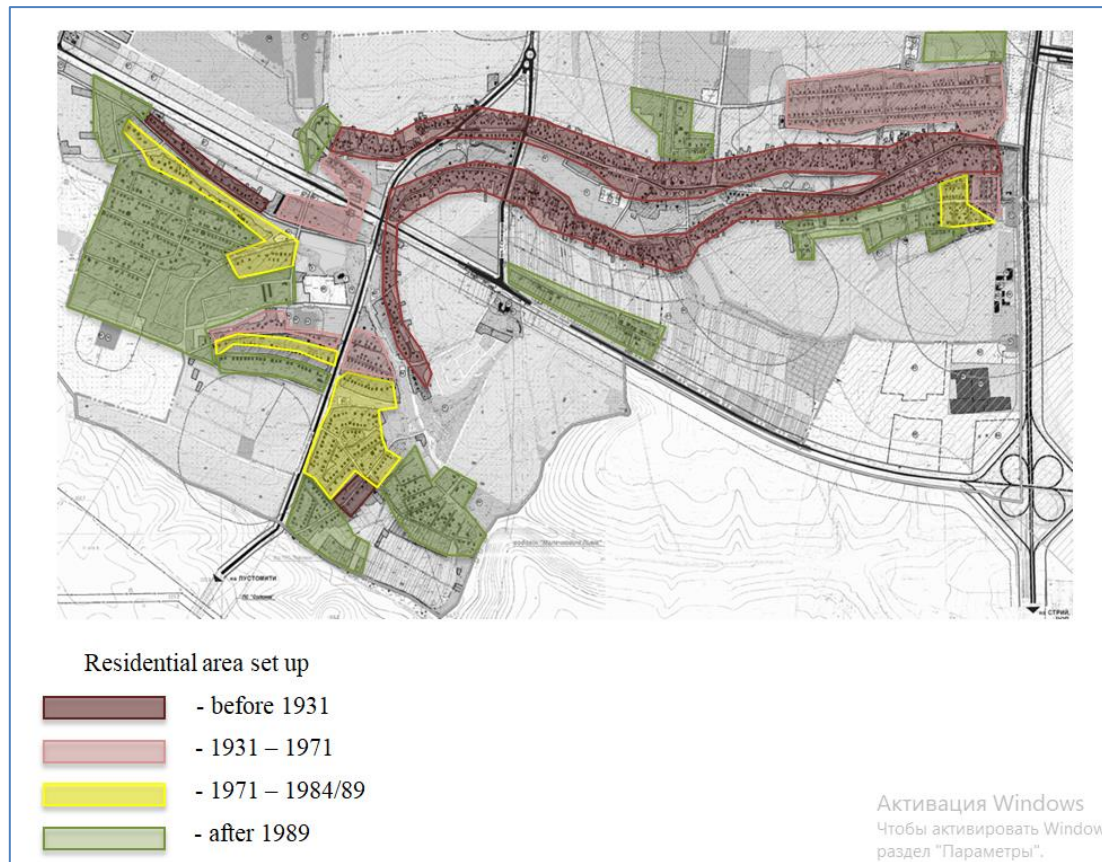
The urban morphology until the 1950s was significantly determined by natural conditions such as local orography, microclimate, and hydrology [13]. As heating required physical exercises and was time consuming, houses of peasants were small in size and located on the sloping part of the valley. Thus, in oldest part of Sokilnyky street network has vernacular line system. A big part of the new residential areas built after the 1950s are located in the so-called Lviv plateau, a relatively high, flat area about 300 meters (980 feet) above sea level what is windy in the winter. After 1991 new houses were also constructed on top of flat hills with grid street network as we see in the case of Panska Hora ("Rich Hill") and other new subdivisions.

In 1970s in order to provide housing for the growing number of workers in Lviv, bus and jewelry plants, and the land for housing construction was given to workers that were responsible for home construction by themselves [18]. As this area of Sokilnyky was top-down planned ahead, houses are located in the straight line

along the streets with a more or less uniform architectural style.

As for 1984/89, several more blocks emerged in the Soniachnyi neighborhood, also one-line buildings on Kozatska street, and additional streets in the southwest

part of Sokilnyky known as Golda that was a hamlet before 1931. The houses are located regularly the same distance from a street. It is only partly relevant to the Soniachnyi neighborhood as here the size of house lots, given by the state was changed into smaller lots.



**Fig. 4. Growth of residential areas of Sokilnyky in XX century**

After 1989 several new subdivisions emerged, as well as a bunch of new houses in older subdivisions. After collapse of the Soviet Union the construction of houses was conducted gradually by individuals, not by developers. As the land became part of the new market economy, it was sold by owners to newcomers who built houses on their own basis and later years with the service of professional architects. The biggest subdivision was Panska Hora ("Rich Hill") in the west part of Sokilnyky and near the previous Golda hamlet in the southwestern part of Sokilnyky. Also, one street in the southern part of Sokilnyky near the ring road of Lviv city and several additional streets in the Soniachnyi subdivision emerged.

After collapse of the Soviet Union the size of house lot depended on the area where it was located and how the privatization process of state land from the Soviet era was conducted. In areas that had been growing during the last decade of the Soviet Union, the vacant land was purposely prepared for future housing constructions with suitable land lots and as result they are regularly located on the same distance from a street. These include the subdivision Panska Gora, Golda, and house lots close to the ring road. The street network of these residential areas is represented by something between cul-de-sac and greed, as some streets are long without intersections with

dead end. Other land was given for agriculture use of residents (*osobyte selianske hospodarstvo*) and only after this changed it status for house construction. As houses were built in the area of former privatized agriculture fields, the house lots reshaped the former field sizes and it location is irregularly. In some cases, house lots were much bigger than average as new residents bought nearby fields. In addition to detached houses, a few multi-floor houses and gated cottages were constructed in different parts of Sokilnyky in the 2000s and 2010s this time by developers.

The emergence of commercial units affected urban morphology significantly especially after 2000s. Malls, hotels, gas stations, warehouses, manufactories were erected in outskirts of Lviv city within the juridical boundary of Sokilnyky close to main roads. New commercial units are fragmented (unconnected), car oriented and concentrated near highways and incoherent with each other and with lack of integrity with existing residential areas. Such mono-use planning and concentration of commercial units in one area that dominated in second half of XX century is out of date and opposite to mixed-use approach and transit oriented development (TOD) in contemporary urban planning.

#### **The effect of land distribution and privatization**



**on peri-urban transformations.** Based on the analysis of changes in land ownership, household farming, detached houses' number and size, household income and urban morphology in Sokilnyky allow finding out three key consequences of land distribution and privatization on peri-urban villages in largest Ukrainian cities.

Firstly, privatization of land provided opportunities for small scale supplemental self-farming used as a surviving strategy for one class of people, rural and even urban residents, which was especially relevant for western Ukraine during the economic crisis of the 1990s. However, after the 2000s, when the income of the Ukrainians increased, the role of the supplemental farming decreased. For another class of people changes in land-policy gave space for housing and commercial construction causing the emergence of eclectic landscapes of peri-urban settlements with mixing different classes of people with different lifestyles.

Secondly, this land distribution and privatization was crucial in the emergence of chaotic, fragmented and ad hoc new housing and commercial units as parcellation

of land in the 1990s preceded urban planning and master plan elaboration<sup>4</sup> or was based on old master plans of the 1970s and 1980s. Master plans have been updated or modified after the major waves of land distribution. The village council was often forced to adjust the master plan for existing sites or land uses. An example of such planning mismatch is a part of village where the land was initially distributed for self-farming and later became a housing lot with or without changes of juridical status of land, and the roads between agriculture fields became streets in new residential areas. Former agricultural land/fields (*osobyste selianske hospodarstvo*), their size, shape, orientation and driveway between them - everything that was drawn by a local land manager (*zemleporiadnyk*) in the mid-1990s for agricultural purposes and later was privatized – are becoming housing sites and in many cases are not suitable for comfortable life. In some places the construction of cottages is in the most unexpected places of former agricultural lands without integration to existing residential area (Fig. 5).



**Fig. 5. Cottage house constructed in former agriculture plot in Sokilnyky follows the shape of former agriculture field (*osobyste selianske hospodarstvo*) on the left**

*Photo by Author 2016*

Finally, the land distribution, privatization and commodification created conditions with biased for-profit land-development and shrinkage of public spaces and green open spaces. The former state owned orchard in Sokilnyky, abandoned in the 1990s and 2000s, but a popular for a weekend picnic place is marked in master plan for the future housing construction that has already begun. Instead, a green area is planned near the main highway, a few hundred meters from the runway of Lviv International Airport. In the other quarter, known as Golda, access to small streams with green shores is no longer available. They have been fenced off by homeowners with creation of artificial reservoirs, although in the master plan this area is public. The largest reservoir in this quarter is in private hands together with the restaurant "Kozatska Rada" and is accessible only to restaurant visitors (as for 2016). But the largest lake that is still

in communal ownership in the village is available to all. The vast majority of playgrounds and sports grounds are located in areas where housing is hampered by the proximity of groundwater, or where the size of the lot was too small for housing construction.

As urban planners informed in informal conversations (recorded interview was impossible to conduct as topic of privatization of land and even urban planning is highly sensitive) they usually got pressed from the side of village councils. Privatization of land explains why urban planners have a weak position during the elaboration of master plan with functional zoning. The village council hired a planning company to create a master plan of Sokilnyky, and village councils, holding a higher status as customer, dictated future zoning areas to maximize future housing and commercial units to get profit (both personal and for village council).

<sup>4</sup> In the Ukrainian post-socialist context, a master plan does not guarantee a comfortable living environment because of the lack of up to date expertise in urban planning and especially in urban design on the one hand, and the ability to circumvent the comprehensive plan on the other hand through, for example, detailed plans of the area.

At the same time, urban planners having weak legal planning regulations, especially in rural area, are in a less powerful position. As a result, the Sokilnyky master plan gives an abnormal priority to residential and commercial zoning, and much less to public and green space. In a case when marsh and floodplains do not exist in Sokilnyky, future public spaces as green areas will not exist at all in the master plan.

**Conclusion and discussion.** After strict communist party control, architecture and urban planning regulations became weaker and offered space for housing and commercial constructions in peri-urban areas. The way land was distributed and privatized is key trigger that shaped the peri-urban villages that became chaotic, fragmented with ad hoc housing and commercial developments, shrinkage of public and green areas, and biased urban planning for profit in master plans. De jure peri-urban settlements are rural, but de facto – serving the needs of a large city.

The land distribution and privatization is an example how phenomenon, events and practices are part of broader social processes determined by social structures or system of relations. Post-socialist form of capitalism as system of relations with nepotism and corruption determined decision-making process of different actors involving officials, urban planners, businesses and residents resulting in tangible consequences described above. Those changes have long lasting effect as urban fabric (morphology, houses type, green and public spaces) is hardly to change where a lot of private and business interests are intersected.

As a result of land privatization peri-urban areas became a mix of different social classes living side by side, with some level of affluent residents concentration. But Ukrainian peri-urban areas are not as contrasting as the fast developing economies - Brazil, Nigeria, India, Mexico or Kenya. There's segregation and the difference in quality of life of colossal ones. Ukrainian peri-urban villages are not heterogeneous even comparing to our southwestern neighbors - Bulgaria, Macedonia and Albania, where unregulated residential areas border the rich one [28].

The case of the Lviv peri-urban village Sokilnyky shows the transformations are going alongside with changes in other countries of Central and Eastern Europe described by such authors as Sonia Hirt [10; 11], Kiril Stanilov, and Ludek Sykora [27]: a) the number of residents in suburb is growing (while in Ukraine overall population is shrinking); b) transformation of former *dacha* settlements into real suburbs (what is resented in other villages around Lviv); c) non-residential suburban development including big-box shopping centers, malls, warehouses, light industrial facilities, and office parks (the latter exists in plans in other part of the Lviv outskirt Riasne). However, the planned suburban communities by large international real estate investors, who are creating

“time-tested development schemes” without respect to local contexts in the case of Lviv, is only emerging with involving of national companies.

In addition to how land was distributed and privatized, the chaotic and fragmented development of the Ukrainian peri-urban areas is caused by the administrative fragmentation around cities. Administratively independent units have own, inconsistent with one another and with the city, goals and development strategies. At present, there is no coherent strategy and coordination between peri-urban villages and cities, and master plans for cities expansion have no clear juridical implementation or mechanisms of cooperation. The law adopted in 2018 about the possibility of an adjacent village to join the city - at the request of the village council and the community [30] - provides opportunities for joint development, but does not contain clear mechanisms for cooperation. The law about urban agglomerations in Ukraine with attempts to provide city and surrounding villages with mechanisms for cooperation was not adopted in August 2019.

The repeal of the moratorium on the sale of agricultural land - *paji* will not affect the peri-urban areas, since de facto the market for such land already exists through various forms of long-term lease. Only in the case of emergence of a state program initiation of small-scale farming support and lending on the basis of private land ownership can give impetus to the development of specialized agricultural entrepreneurship in the cities' environs, but not in close proximity. In addition, the market for land of personal farming (*osobyste selianske hospodarstvo*) up to 2 hectares has long been functioning in Ukraine with a possible change in the land status for construction.

Further research is needed to find answers for the questions that are especially relevant in the new conditions of decentralization when local municipalities are getting more and more power in decision-making and when legislative side of planning is still unclear and changible – how the urban planning expertise is developed and how it shapes master plan elaboration of peri-urban areas? How different actors were involved in decision-making process and how it affected priorities framed in master plans? Which narratives dominate regarding the future of peri-urban villages in different actors including city and international actors representatives – the EU and USA support programs – ULEAD, USAID, DOBRE? Qualitative methods such as ethnography, participant observation and in-depth interviews will come in handy. The answers to these questions will help to understand the focal processes in urban planning as complex political practice in order to advance juridical regulations and improve the quality of urban planning regarding the issues of social justice and environment friendly development.

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