### Do we Need Urban Shrinkage to Become Smarter Planners? The Masterplan for Novoshakhtinsk

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## **1 ABSTRACT**

The urban planning transition in Russia has been following the way from the so-called commandadministrative system to a new one which should be more democratic, market-oriented, more adequate and corresponding better to the current needs of the cities and regions. However, since the planning system is an element of the political system and is characterized by the same disadvantages such as lack of the local independency and resources, weak capacities of local authorities, absence of opportunity to implement the specific planning addressing local issues that are not into the national planning agenda. A silent but widespread process of urban shrinkage affects most of the Russian cities that are deprived of a possibility to develop new approaches to planning that could help them to confront this challenge and very few cases of the appropriate policy development appeared in the country. The present paper explores an example of a planning experiment in a former mining city Novoshakhtinsk in southern Russia that is developing a masterplan aiming at addressing challenges provoked by urban shrinkage.

Keywords: shrinking city, mining city, depopulation, urban planning, masterplan, Russia

#### **INTRODUCTION** 2

A shrinking city in any country faces not only issues related to its spatial, social or economic development but also must confront great resistance of the existing political institutions, planning culture and state ideology while planning for shrinkage since they hardly accept the new reality of urban shrinkage. In Russia, most regions and cities are currently depopulating and are facing the new unknown challenges accompanying the urban shrinkage process. However, they are limited by the paradoxical situation in which the national policy, becoming more and more centralized and leaving fewer opportunities for selfgovernance and local policies formulation, at the same time totally ignores spreading all over the country urban shrinkage issue and provides place-unspecific growth-oriented solutions (BATUNOVA&GUNKO, 2018). Notwithstanding, in some cities, the emerged issues related to urban shrinkage become so extremely influential that the municipalities start searching for innovative solutions even in this unfavorable for any innovations political environment. It is not that different from the rest of the world, in which neoliberal ideology does not favor acceptance of urban shrinkage as a possible future and where the systematic changes happen when a city's attempt to return to population growth fail and shrinkage consequences become a notable issue (PALLAGST, FLESCHURZ&SAID, 2017).

The paper explores the case study of the master plan development for a shrinking city Novoshakhtinsk in the Rostov region of Russia that represents a rare for Russia case of the municipality that is moving towards the application of a 'decline-oriented' approach – planning with the assumption of the future population decline. The process is innovative in Russian planning due to two factors. First, acceptance of urban shrinkage as a natural inevitable process and planning for shrinkage is still a 'taboo' in the Russian political discourse. Second, this kind of tool as a 'master plan' (in contrary to 'general plan') does not exist in contemporary Russian law and its development is an experiment born in collaboration with the local authorities and planners that enrich the experience of both sides.

#### 3 **URBAN PLANNING IN TRANSITION**

Russian planning system as a part of the state socio-economic and political formation has been experiencing dramatic transformations. The strict hierarchical socialist system of economic and spatial planning, in which the goals for existence and development of any city were defined and implemented by the state, collapsed. After a long 'no planning' period caused by a kind of allergy to planning after the USSR dissolution and strong beliefs that market is able to solve all the development issues, the planning system was introduced again in 2004 together with the approval of the new Urban Planning Code. From its beginning, the new planning law was subordinated to land legislation developed much earlier. Both actually had to support a

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privatization process, which is still ongoing and is far from being complete. Since its approval, the Urban Planning Code had numerous amendments: in the last decade, when the state has been following a path of recentralization of governance (GELMAN, 2018), the meaning of a general plan as a tool for setting the goals of long-term spatial development vanished from the law. Nowadays, a general plan is just an instrument for the spatial localization of sectoral plans of federal and regional ministries or local departments and also a calculation for the necessary land provision for housing and infrastructure construction. If during the socialist period the general plans' development based on the goals set by the national government, now the possibility to define goals and objectives is absent in the modern spatial planning at the municipal level. Planners continue to design comprehensive plans of the desired cities, operating in growth paradigm (BATUNOVA & GUNKO, 2018). Continuing in Russia after the USSR dissolution for many years construction boom and lack of housing and commercial buildings, especially in the larger cities, path-dependent growth-oriented planning and false statistics created blinkers before planner' and policymakers' eyes. Moreover, the collapsed Soviet planning system in the 90s and following years of no-planning vanished many experts from the profession and interrupted continuity in the profession's evolution that is resulted nowadays in the lack of professionalism in planning. Entering today into the profession, planners dragged to light the old methods used in the Soviet times while the state itself introduced planning law and regulations borrowed from the other planning cultures and is not operating as intended. Cheap mass housing construction in a form of wellknown micro districts and targeted goals measured in millions square meters of housing set by the national government continue to be the main drivers for urban development in major cities. Simultaneously silent but wide-spread process of urban shrinkage corrodes most part of the country's urban system and poses problems previously unknown to cities. However, the relevant for most Russian cities problems in the current model of urban planning are ignored and, accordingly, the feasibility of general plans tends to zero.

## 4 MASTER-PLANNING AS A NON-REGULATED ALTERNATIVE

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The current Russian legislation defines two basic documents for long-term urban planning: a strategy for socio-economic development and a general plan. These documents have different objectives, but the separation of socio-economic and territorial planning makes it difficult to form a comprehensive strategic vision of the future city. The strategy of socio-economic development determines the resources and sources of financing, sets target indicators for the development of the socio-economic situation in the city, but pays little attention to the spatial development and territorial localization of the proposed measures. The general plan focuses on land use, construction, technical infrastructure, but practically ignores the socio-economic rationale for engineering and technical solutions. The national law clearly defines the relationship between long-term planning documents at the municipal level: the Urban Planning Code declares that 'the development of territorial planning documents is carried out on the basis of strategies (programs) for the development of individual sectors of the economy, priority national projects, interstate programs, programs for the socio-economic development of the constituent entities of the Russian Federation, plans and programs for the integrated socio-economic development of municipalities (if any)' that means subordinate position of territorial planning in relation to socio-economic planning. Paradoxically, strategic planning is optional for municipalities according to the Russian law and in most cases, a general plan remains the only long-term planning document.

A master plan is a relatively new term that appeared in the Russian professional planning discourse and there are two main areas of professional activity in which the term 'master-plan' is used: a strategy of a city's spatial development and an urban design concept (BELOUSOVA, 2019). A master-plan does not have any legal status and exists informally not supported by methodology or requirements to the document. There is no common agreement among planners and policy-makers on what is a master-plan. All mentioned aspects cause difficulties in a master-plans implementation – there are no legal tools for it. Strategic master-planning in the contemporary conditions in Russia remains an area of risky investments also due to the instability of local authorities and the absence of continuity in political decisions. At the same time, more and more master-plans emerge because they serve as the missing component that could link socio-economic and territorial planning. However, their main function is an experiment, an attempt to create different 'what if' scenarios' which are not possible within the existing legal framework.

# 5 THE NOVOSHAKHTINSK CASE

Novoshakhtinsk is a former mining town in southern Russia having a population of 107,539 people (2019). Its foundation in 1939 was due to the growing coal mining production in the Eastern Donbas which started in the second half of the 19th century: several small mining towns grew rapidly and, after the construction of the railway, were united administratively and got city status. At the moment of foundation, the city had a population of 48 thousand people. By 1962 the Novoshakhtinsk's population reached its maximum of 108 thousand people and in the following years, the population number had been fluctuating at the level of 100-107 thousand people until 1994. Since 1994 the population of Novoshakhtinsk had been constantly declining. It reached its minimum of 100.6 thousand people in 2004 (ROSSTAT, 2020) and in 2005 the city administration decided to include three rural settlements bordering the city to maintain its population number over 100,000 people. Despite this, the Novosjhakhtinsk's population continued to decline from 116.2 thousand people in 2005 to 107.5 thousand people in 2019 (ROSSTAT, 2020). Both job-related outmigration and natural population decline cause Novoshakhtinsk's depopulation. The coal-mining industry's decline started in the area at the end of the socialist period and after the USSR dissolution, this sector plunged into crisis. The last mine was closed in Novoshakhtinsk in 2003 due to the national restructuring of the coal-mining industry and after the tragic accident at the mine 'Zapadnaya-Kapital'naya'. Since the end of the socialist period, Novoshakhtinsk had been experiencing out-migration but it managed to reverse the negative trend in 1999. From 1999 to 2019 the net migration balance was positive in the city due to the impact of different process: the attraction of migrants from the northern and far-eastern parts of the country during the first decade after the USSR dissolution, active diversification of local economy and attraction of new workers from the nearest rural areas and the other Russian region, relocation of the Ukrainian migrants caused by the armed conflict in Eastern Ukraine. However, the mortality in Novoshakhtinsk steadily exceeds the birth rate at least twice and a positive migration net is not able to compensate for significant natural population decline. Due to migration, the city gained about 6.3 thousand people in the period 1998-2017 but it lost 18.8 thousand people due to the excess of deaths' number over the number of births in the same years (ROSSTAT, 2020).

During the socialist period, the state planning for Novoshakhtinsk had been growth-oriented and provided by the state. The first Novoshakhtinsk's general plan developed in 1939 by architect I.Dedkov planned a city that had to reach a population of 85,000 people by 1942 (PILIPENKO, 2009). The following documents always planned a city for a bigger population. The socialist general plans also tried to tie the Novoshakhtinsk's fragmented planning structure that was the main characteristic of a city founded through the unification of settlements, founded in the closeness to the mines. Planners introduced new residential areas and public centres within voids between former mining settlements, however, Novoshakhtinsk did not manage to overcome this disadvantage of its planning structure (BATUNOVA, E. & TRUKHACHEV, 2019).

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		Center
5	11	Gorlovka
	III	Antipovka
	. IV	Petrovskiy
XVII S	V	Gor'kogo
	VI	Belysheva
XVIII	VII	Tel mana
S XVIX	. VIII	Yuzhnyy
	IX	Krasnyy Shakhter
XXII Y VII C YXXV	x	Кігоча
	XI	Gorodskaya
XV VVV	, XII	Mikrorayon
	XIII	Mikhailo-Leontievsky
S KI SXII	XIV	Zapadnyy
	XV	Nesvetayevskiy
XXI L XXIX	XVI	Novaya Sokolovka
	İ XVII	Sokolovo-Kundryuchenskii
	XVIII	Yubileynyy
y (II)	XIX	Krasnyy
XXX VIII	XX	Sambek
a harder	XXI	Radio
VIII VIII	XXII	Vtoroye otdeleniye ZAO Prigorodnoye
XXIV XXIII VIII IX X	XXIII	Proletarskiy
	XXIV	Bugultai
	XXV	Pervoe otdeleniye ZAO Prigorodnoye
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Fig. 1: Novoshakhtinsk's planning structure composed by former mining settlements.



After the USSR collapsed when economic and population decline became the main trends in Novoshakhtinsk, the city's fragmentation increased due to the degradation of the never complete settlements' peripheries and vacancies or abandonment that spread all over the city. The successful attraction of the state investments and implementation of the new housing projects, on the one hand, improved people's living conditions but, on the other hand, accelerated erosion of urban morphology due to the relocation of the residents into the new residential areas.



Fig. 2: A dilapidated apartment building. whose residents were relocated according to the housing program. Photo: M. Bolotov, 2020

Currently, there are more than 2,000 unused buildings in the municipal register which is not complete yet. Management of these properties is a challenging task: 94.5% of residential buildings are privately owned but the legal mechanisms that could help municipalities to confront this issue are immature and lead the city into a cul-de-sac.

## 6 MASTER-PLAN FOR A SHRINKING CITY

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The critical situation called for searching specific solutions to address the emerging issues. Novoshakhtinsk's municipality started forming a comprehensive vision of the city's future from the beginning of the 2000s. In 2000, the municipality created its first program of socio-economic development but the most innovative transformations of the local planning started with the arrival of the new Mayor Igor Sorokin in 2008 who was re-elected for a second term in 2014 until 2019 when he left his position. It worth noting that the political situation in the city had been quite stable and positive during the 10-year stay of Mayor Sorokin in power. Thanks to him and his team in 2009 Novoshakhtinsk's municipality developed the new general plan started implementing the 'compact city' concept (even if it was not labeled in this way) through the reinforcement of the city center and preventing urban sprawl. In 2010, the local administration developed the strategy of socio-economic development until 2020 - not obligatory for the municipalities document. Both documents were regularly updated to find the working tools to address the emerged issues. Obviously, the main goals in those strategies were the city's economic diversification since the collapse of the mining industry Novoshakhtinsk lost its economic basis. Housing construction and development of the social and technical infrastructure were as well in the focus of the local policy but the process of urban shrinkage was not addressed until it was widely spread and evident in the cityscape. However, it was not ignored either: the municipality started monitoring vacancy and abandonment since 2006-2007. Depopulation and urban shrinkage became drivers for the appearance of the new approach to strategic planning in Novoshakhtinsk.

The idea of the master-plan development emerged as a result of a long-term collaboration between the city's administration and the private planning bureau Southern Urban Planning Center. Proposed by the planning bureau volunteer experiment was supported by the local authorities and in February 2019 the work began. If a master plan itself is a novelty for the Russian planning culture, then a master-plan for a shrinking city that accepts future population decline is 'terra incognita'. In Russia, very few examples of realized planning for

decline exist and all of them have been implementing in totally different conditions compared to Novoshakhtinsk. For example, the famous policy of the 'controlled shrinkage' that the Arctic city Vorkuta implements has been realizing in the conditions when the bigger share of housing is presented by the apartment residential buildings and is owned by the municipality (POLYAKOV, 2019). In Novoshakhtinsk applying similar tools is impossible due to the high share of private property and single-family houses with a garden as the prevalent typology: such conditions conduce emerging of numerous erosions in different parts of the city that hardly can be controlled.



Fig. 3: A series of participatory workshops organised for different groups: children, students and representatives of the municipality. Photos: E.Batunova, E.Khityova, 2019

The master-planning process based on the participation principle and the first efforts targeted the involvement of different stakeholders' groups into the city's problems' discussion. The first step of the participation process included a series of deep semi-structured interviews conducted with the local professionals: local experts, representatives of the local authorities, heads of the companies providing technical services, cultural and educational organizations. This kind of 'participation' is the most natural and familiar in the urban planning process in Russia. However, in this case, interviews were not directed by the concrete purposes of the general planning defined by the Urban Planning Code but were more free discussions on the city's' main challenges, opportunities, and possible strategies. The next step aimed at involving the different groups of the residents and the external participants in the discussion of the city's future. Thus, several workshops were organized starting from the children workshop with the youngest students of the Novoshakhtinsk's art school and finishing with the students of several universities of Rostov-on-Don. The aim of those events was in generating different strategies to address urban shrinkage issues. In parallel, numerous field trips and observations were made together with the desk research that included a literature review, statistical analysis, mapping of the critical issues in the city's spatial development (such as abandonment, vacancy, non-registered in the cadastre land and others, see fig.4).

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Fig. 4: A fragment of the Zapadny settlement' territory with the mapped demolished and planned for demolishing buildings. The map was developed on the basis of the municipal monitoring register with the following actualisation through the field trips observations.

During this long process the main principles for a master-plan were developed, which are defined as the most important for its successful implementation: 1) True assessment – impartial evaluation of available resources and existing issues; 2) Continuous harmonized planning; 3) Realism and efficiency – setting achievable goals and identifying resources, careful and efficient use of available resources and the generation of new resources; and 4) Involvement.

Based on the planning principles and active participation, the strategic vision for Novoshakhtinsk was formed:

Novoshakhtinsk is a laboratory of opportunities that unites developed, clean, green and safe urban areas (towns) with equal access to services and strong identity.

The implementation of the strategic vision includes 4-RE strategic directions:

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(1) RE-SOURCE CITY: Rethinking the available resources of the city. Transforming the negative aspects of urban development into resources. Residents of the city as the main resource for transformation. Problems as a resource for innovation.

(2) RE-CONFIGURATION: Optimization of the spatial structure of the city for a decreasing population. Reengineering Urban Infrastructures and Services

(3) RE-HABILITATION: Search for mechanisms to improve the quality of the urban environment with a focus on everyday comfort and safety. Short-term and long-term solutions, temporary measures for rapid qualitative changes and the creation of conditions for gradual systemic transformations.

(4) RE-CONTEXTUALIZATION: Formation of monitoring systems and databases containing information on the state of the urban environment and key elements of the urban economy. Constant updating of information about the city at different levels. Involving a wide range of participants in monitoring. The formation of horizontal ties.

The very important part of the work was to find a way of the masterplan's measures legalization. The proposed model for the formation of planning documents in the municipality involves the first development of a strategy for socio-economic development, then the master plan of the city with the sequential or parallel development of a general plan (in the case of Novoshakhtinsk, updating the general plan based on the results of strategic planning). The city administration decided to approve at the end of the process a new 'Strategy of socio-economic development' that will include harmonized measures of the strategy of socio-economic development and of the master plan.

Thereby, the master-planning process for a Russian shrinking city called for evolving new approaches and became an experiment for both planners and policy-makers leading to the formulation of new tools and solutions within the institutional framework that is not conducive for implementing of policy for the decline.

### 7 CONCLUSION

Novoshakhtinsk is a medium-sized former mining city experiencing 30-years long population decline during which a city lost about 13% of its population. The city is facing unknown challenges of widespread urban fabric erosion that the local authority is not able to address properly due to the gaps in the national legislation, lack of finances and difficulty to provide an alternative vision within the growth-oriented planning system. Being dependent on the upper levels of government in their financial and authority capacity, lacking high-skilled specialists, municipalities are strictly limited in their possibilities to respond to the new challenges. There are no successful cases in the country that could be adopted, no law or instructions that cities could follow, but, at the same time, the state requirements to housing construction and provision are equal for growing and shrinking cities that put the latter even in a more complicated situation. Nonetheless, worsening situation provokes in some cases transformation of the local visions and perceptions and transforms shrinking cities into laboratories experimenting with smarter and more specified approaches to planning and policymaking. In Novoshakhtinsk, a combination of many factors, such as professionality of the local municipality's team, its long and successful experience in planning and policy-making, the gravity of the shrinkage issue and readiness to percept the phenomenon realistically, led to the appearance of the innovative approach to the strategic and spatial planning for the city. 'There is nothing to be afraid of, shrinkage is just new conditions' - these words of a former City Mayor Igor Soroking formed the city administration's perception of urban shrinkage and its willingness to 'plan for decline'. The understanding of the complex urban shrinkage causes, lying at different scales and not manageable by the local authorities, provoked an emergence of comprehensive local planning and policy, oriented to cope with the challenge. A collaboration between planners and policy-makers, having a similar perception of urban shrinkage, made possible emerging of an innovative planning experiment that is a novelty in the Russian contemporary political context. Its final implementation is still uncertain, however, the process of planning for shrinkage itself became a driver for evolving of new for Novoshakhtinsk methods of participation, collaboration and decision-making that undoubtedly will impact the city's future development.

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