ISOCARP INSTITUTE
Centre for Urban Excellence

INTEGRAL GUIDELINES FOR URBAN TERRITORIES A SET OF PRINCIPLES FOR THE INTEGRATED DEVELOPMENT OF URBAN AREAS

STRELKA KB

СТАНДАРТ КОМПЛЕКСНОГО РАЗВИТИЯ ТЕРРИТОРИЙ

REVIEW

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Content

Preamble

Early January 2019, STRELKA KB commissioned the International Society of City and Regional Planners (ISOCARP) to review the "Integral Guidelines for Urban Territories – A set of principles for the integrated development of urban areas – Стандарт комплексного развития территорий". This review was conducted by senior members of ISOCARP through the research and project office of ISOCARP, the ISOCARP Institute, Centre for Urban Excellence.

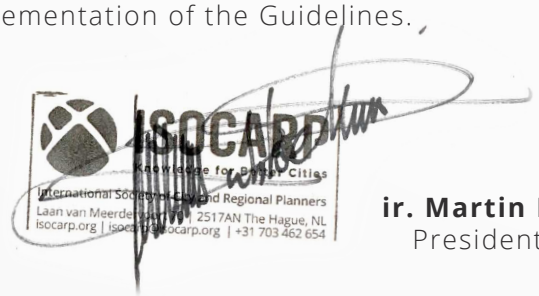
ISOCARP is very honoured to be invited to review the Integral Guidelines for Urban Territories. During the review process, the team of reviewers was impressed with the quality of the guidelines, the precise description of the challenges encountered in Russian cities and regions, and the identification of the measures to be implemented to achieve more sustainable, liveable and integrated Russian cities. It reflects many of the principles of international urbanism and placemaking.

Our team of experts has reviewed the guidelines very thoroughly, has discussed the described topics and has developed some short term and longer-term recommendations.

On behalf of ISOCARP, the team of experts has reported to me that they are convinced that the "Integral Guidelines for Urban Territories" is an excellent document, that reflects the current challenges and proposes tools and solutions to improve Russian cities and the quality of life of their inhabitants.

We recommend all cities in the Russian Federation to take notice of the publication and apply the recommendations as described in these guidelines.

We wish STRELKA KB and all cities in the Russian Federation tenacity in the policy implementation of the Guidelines.



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STRELKA KB

REVIEW

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1 INTRODUCTION

The "Integral Guidelines for Urban Territories – A set of principles for the integrated development of urban areas" is a guidance document published by STRELKA KB, Moscow in December 2018, aiming to define the main approaches to design the development of residential and mixed-use areas for Russia, in correspondence with the needs and demands of residents, while taking into account the peculiar characteristics of development in Russian cities and the best international practices in the formation and transformation of the urban environment.

The scope of the Guidelines covers territories intended for residential and mixed- use development, which has been named by STRELKA KB as "the Standard". This Standard does not apply to any other areas: business centres, university campuses, stadiums, technology parks, museum quarters, manufacturing areas, hospitals, etc.
The standard covers various spheres of the spatial development of urban areas: formation of new housing developments on greenfield sites, transformation of the territories of existing housing developments, and the improvement of public urban spaces. The separate books making up the Standard are targeted to a wide range of users: residents, designers, developers, and those working for city administrations. The purpose of the Standard is to develop recommendations for the formation of a coherent urban environment and improve the quality of life of citizens.

The Guidelines consists in several books, which are in detail:

- Book 1 in English, including 5 Parts and Annexes;
- Book 2 in Russian, focussing on Urban Development Standards, including general provisions, evolutionary development of urban areas, three-dimensional regulations, development of the algorithm and annexes;
- Book 3 in Russian, focussing on Standard of development (exploitation) of vacant territories, including general provisions, target model, and examples;
- Book 4 in Russian, focussing on Standards for creating cities character, including general provisions, open urban space recommendations and types of urban environment;
- Book 5 in Russian, as a Guide on Development Project, including recommended approach to urban project planning, architecture, land improvement, public involvement, architectural competitions, costs measurements on land development projects, as well as examples;
- Book 6 in Russian, as a Guide to Project Implementation, including Project realisation, mechanisms for involving territories, tools for financial stimulation, key parameters for area development projects, procedures for monitoring and annexes;
- As well as 3 catalogues of urban elements (Tool Kit), which include detailed information e.g., description of materials related to climate conditions, urban infrastructure and street designs, density simulations and much more.

CONSIDERATIONS ABOUT THE FUTURE OF OUR CITIES

How we plan, build, and manage our cities today will determine the outcome of our efforts to achieve a sustainable and harmonious development tomorrow. Well-planned cities allow all residents the opportunity to have safe, healthy, and productive lives. Well-designed cities present nations with major opportunities to promote social inclusion, resilience, and prosperity.

The world is at a crossroads. In the next few decades, urban dwellers will double in number, reaching nearly three-quarters of world's population. More than 60% of the built environment needed to accommodate these new urban dwellers by 2030 has yet to be constructed.

"Cities are the world's engines for business and innovation. With good management they can provide jobs, hope and growth, while building sustainability." With 60% of their area still to be built before 2030, cities represent unparalleled opportunity to forge a new urban era where people can find freedom, inspiration, prosperity, health and security. They represent a unique chance to make the right infrastructure and planning choices to overcome many of the mistakes of the past and to make our cities and communities truly regenerative and resilient.

We see emerging trends of public, private, and civil society organisations working together to improve quality of life and livelihoods. We see these organisations leveraging resources to improve urban services. These and other efforts undoubtedly improve the lives of the people they touch. But, in the end, these approaches do not address basic structural problems nor do they offer answers appropriately scaled for tomorrow's challenges. To do so requires rethinking the very organisation of a city and envisioning its future. For this reason we need to forge a new urban paradigm for the city we need.

While the city we need must recognise local contexts, cultures, and customs, it is founded on two key conditions: the respect of public and private uses of land, and a well-coordinated system of systems. If a city is to function properly, it needs to coordinate very diverse agendas related to land use, housing, energy, water, waste, mobility, health and education, economic development, and the promotion of gender equality, cultural vitality and social inclusion.

New predictive planning and modelling tools based on systems approaches provide an unprecedented means for all stakeholder groups and city authorities to better understand the complex social, economic and political interconnections inherent in urban systems. These tools and approaches enable decision makers and urban inhabitants to use systems thinking and systems-based approaches to avoid unintended consequences of policy actions, to greatly enhance the effectiveness of decision making and achieve efficiencies in resource allocation and use.

Systems approaches can further help realise a heretofore impossible dream: that of bridging short-term economic goals with longer-term policies and strategies that focus on shared prosperity and better health, safety and well-being of all of a city's inhabitants.

New understanding and awareness of the importance of place making and building a sense of identity that places public space at the forefront of urban development, as a means of greening the city, strengthening a sense of security and providing opportunities for enhanced social interaction and diverse forms of expression.

The digital revolution offers new opportunities for the efficiency and responsiveness of urban services. It offers new ways and means for the inhabitants of the city to engage with public authorities in decisions affecting their quality of life and livelihoods. It helps avoid mistakes of the past in, for example, the failure to consider gender and age-sensitive needs and priorities in urban planning and design. It provides opportunities for innovative and collaborative economic models and social contracts that enhance social solidarity and social cohesion.

An important opportunity lies in changing the paradigm from a centralised production approach, in which citizens are only users of a provided service, to participative and collaborative models of production that empower people and communities to become co-producers of energy, public goods and services.

Participatory models of production of public goods and services also offer new opportunities for cities to take full advantage of the "circular economy" by creating new business models, new industries at all scales and new employment opportunities and decent work.

Growing awareness of the risks of climate change and the unsustainable models of production, consumption and development offer new prospects for the regenerative city and the circular economy. This goes beyond the concepts of reusing and recycling to restoring and replenishing the natural systems that support urban life. It allows for a different relationship between urban and rural areas and offers a new prospect for urban and peri-urban agriculture and the foundations for the truly ecological and resilient city.

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2 SCOPE OF REVIEW

2.1 METHODOLOGY

STRELKA KB mandated in January 2019 the ISOCARP Institute to review the «Body of Principles for integrated development of urban areas» of the Standard of integrated development of areas.

The book to be reviewed is a part of a set of manuals (6 books in total) on residential development in Russia. They are addressed to professionals and local administrations dealing with levelling up the quality of built environment and housing all over the country. The book Nr. 1 (English) to be reviewed represents the general concept, vision and approach to the problem while the rest of the books suggests practical solutions on its implementation. The format of the book is 300 pages of illustrated text.

In January 2019, ISOCARP Institute carried an internal call of Experts within its membership, which was endorsed by STRELKA KB by end of January 2019. The Team of Experts consists of 5 Experts and one moderator (Experts profiles are in the Appendix).

The work methodology was as follows: each Expert had to read the all Book in English, including annexes, had to look at the other books in Russian, and write a discussion on one dedicated part of the book. 3 Online meetings took place (18th February, 1st March and 8th March 2019), where parts of the book were discussed, Experts contributions amended, and conclusions formulated.

Expert discussion reports are referring to international literature, deficits and missing steps identified, recommendation levels discussed, and needed improvements formulated.

The present Review Report includes the introduction, the scope of the review, and the review summary; the Appendix includes the 5 Expert discussion reports and the Expert CVs.

REVIEW'S SYNTHESIS

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The Expert Team would like first to congratulate STRELKA KB for the high quality and extensive publication of the Integral Guidelines for urban territories. During the Expert discussions, all team members reiterate their appreciation to the accomplished work, as well as the very detailed and precise description of the Guidelines. The Expert Team is convinced that the Guidelines are an excellent document, which will contribute to a better and more sustainable urban development in Russia.

However, during the evaluation period, the Expert Team identified some aspects, which could be improved in a second step. We would like therefore to propose to STRELKA KB recommendations on two levels – the short-term and medium/long-term recommendations. Short term recommendations are immediate changes in the publications, which are easy to insert and integrate; medium- and long-term recommendations are more related to the Implementation of the Sustainable Development Goals (SDGs) of the UN, as future steps or future publications, e.g., in the next years.

Short and long-term recommendations are summarised per Book Chapter. For a more complete description, please read the **full description in the Appendix** and the respective authors contributions. Some recommendations may be repetitive; some are focussing only on the related part.

Following pages are the result of a very thorough analysis – the Expert team went very precise with all the aspects of the book.

3.1 RECOMMENDATIONS 1 | PRIORITIES AND PRINCIPLES

General recommendations

· **'Guidelines'** is a more apt term to use for this work as it offers far more flexibility of implementation. 'The Standard' seems rather inappropriate for a country with such a huge variety of geography, urban patterns and climate as the Russian Federation,

· **References to international norms and objectives** could be done more at the level of the objectives themselves and not just a brief general reference in the introductory text,

· More explicit emphasis could be placed on the **mutual interdependence** of the principles and necessity of applying all of them together in practice,

· The distinction into **three target models** carries with it the danger of them becoming too distinctive, separate and disjointed. An **overlying urban concept** would in this respect be useful to tie them together,

· **Urban strategies** could be adopted to provide a general and flexible direction for the longer-term implementation of the Guidelines,

· More attention could be paid to the need for **clear planning processes, good planning coordination and effective local governance,**

· More consideration could be given to the **economic and financial considerations of implementation;** how will the plans be financed and how do they link into local economic development plans,

· The **social component** – inclusivity, participation, affordability, especially of housing – could be strengthened,

· **Influencing changes in human behaviour** could also be a focus of policy; urban design alone is in many cases insufficient to bring about the desired changes,

· **Resilience to climate change and environmental degradation** could be emphasised and elaborated more at the level of priorities.

3.2 RECOMMENDATIONS 2 | SUBURBAN MODEL

General recommendations

• It will be useful **to include a chapter** on Project Development and Implementation in Book 1 (English version), summarising the information given in Books 5 – 6 (in Russian);

• **Distinguish suburban areas** not only by density of built up structures but also according to demographic and socio-economic characteristics of residents, location of particular suburbs within urban areas, and typology of urban areas in Russia by size, regional setting, geographical location, growing/shrinking urban areas;

• Special regulations for (sub)urban areas in **Moscow and St. Petersburg** metropolitan areas – as the largest and most economically attractive and developed urban areas in Russia.

Short term

• Different management and development of growing and shrinking cities could be introduced: the proposed solutions in the Suburban Model are looking for increased density that is in contradiction with the trend of shrinking in some smaller and more isolated Russian cities.

• It would be useful to develop specific parts in the Guidelines for Suburban Model adapted to **typology of cities and (sub) urban areas in Russia** – regarding their size, demography, morphology, location, climate, cultural identity, etc. – that could be easily followed and adopted (with modification) by regional authorities (oblast) and by individual city / local authorities.

• The Suburban Model could introduce ("prescriptive") guidelines and set the minimum threshold of what could be done rather than maximum limits that cannot be exceeded – taking in consideration demographic, social and economic aspects of inhabitants and financial potentials of local and city authorities.

Long term

• More focus to **adequate, safe and affordable housing** and services: Upgrading of low-quality suburbs with subsidies for low income owners (inhabitants / families) for improving the energy efficiency and safety of individual housing constructions, and provision of local infrastructure and services by city and local authorities; including regulating real estate markets and control investments.

• More **safe, affordable, accessible and sustainable transport systems** for all: Planning and developing of new transport infrastructure with land use planning taking in consideration **sustainable urban mobility** (modes of transport) while taking in consideration negative consequences (environmental, economic, social) of increased private transport (number of vehicles) in suburban areas (i.e. air and noise pollution, surface sealing, ecosystem fragmentation; extensive costs of infrastructure, personal costs; accidents, increased daily commuting).

• Enhancing **inclusive and sustainable urbanisation and capacity for participatory planning:** introduce innovative forms of engagement and effective partnerships (i.e. participatory budgeting) with a high degree of transparency and accountability.

• Strengthen efforts to protect and local **cultural and natural heritage** - Natural and cultural heritages (e.g., traditional houses, churches, natural habitat, etc.) are not taken into consideration in the Guidelines (Book 1) for Suburban Model.

• Reduce **disasters, including water-related disasters,** with a focus on protecting the poor and people in vulnerable situations – as climate change will have strong impact on flooding and soil. The Guidance

does not offer solutions regarding the existing built up areas located in flooding areas in the future.

• Reduce the **adverse per capita environmental impact of cities,** including paying special attention to air quality and municipal and other waste management. Implementation of **Territorial impact assessment (TIA)** for new (re)developments according to the Guidelines for Suburban Model.

• Provide universal access to **safe, inclusive and accessible, green and public spaces.** The shift on emphasis from private sphere (i.e. private gardens, up front fences and new gated communities) to public sphere (shopping streets, local parks with sport facilities, etc.).

• Support positive **economic, social and environmental** links between urban, peri-urban and rural areas by strengthening regional planning. There is no reference to the need of good **territorial planning, coordination and governance at the regional level or the level of FUA (Functional urban areas)** – between city administration and surrounding local municipalities.

• Adopting and implementing integrated **policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience** to disasters: develop integrated policies and plans and implement institutional capacity for **"smart growth coalition"** based on sustainable urban development principles with circular economy, green and blue infrastructure, social inclusion and resilient city and local governance.

3.3 RECOMMENDATIONS 3 | URBAN MODEL

Short term

• The diagnosis focuses mainly on the **housing offer,** mainly on comfortable housing, with few solutions proposed for affordable housing.

• The aims of territorial development are covering functions, densities, connectivity, health/safety, housing and mix uses. The approach does not care with **natural risks.**

• **Road / Public transport target indicators are over estimated:** more than 50% for roads and public transport is in contradiction with the reduction of the car needs.

• The question of recreational functions of schools to adjacent parks should be **analysed in detail, regarding the users of these parks, the size, and the capacity** to be used for this purpose. High-density population needs larger parks. The public parks should be not only located at less than 5 minutes distances walk, but also have enough space for inhabitants located in its surroundings. Larger population should have larger parks. The limitation to the size of parks and gardens is not relevant.

• The various types of buildings in residential blocks could be interesting if it is well designed by architects and not an opportunity for developers to develop non-relevant projects in residential areas (i.e. towers in the middle of single houses).

• Linear planting along street participates to the qualification of the public spaces. The continuity of **green spaces crossing blocks** could be introduced. Greenery on the roofs and lower proofing in the parcel (less artificialisation of the soil) should also be adopted.

• **Car parks standards should be reduced** near metro, BRT and train stations.

• Size of blocks differs if they have public facilities and the type of plots and buildings.

A preference should be done to larger blocks reduces the costs for road maintenance and offers more opportunities to develop space for pedestrian and cycling paths. The **maximum size of land plot** (0.9 hectares) is not necessary. Flexibility could be found in very large blocks. Better to adopt principles for fragmentation of building than size of plots.

• A principle of large boulevard (minimum 40m wide) every 2 km to be able to **accommodate mass public transportation** should be a target for urban areas.

• Built frontage on street/plot alignment at 90% is interesting, but should be adapted to the p**eculiar situation of each urban pattern.**

• **50% of movements by public transportation** seem very optimistic. It is possible when the density of public transportation exist. It is only the case on very dense urban areas, and when very high level of investments has been implemented for public transportation. This figure should be reconsidered.

• The number of floors (between 3 to 8) proposed and the accent building at 12 floors are not intertwined. This could have strong impact in the environment. Better to have only an addition of one floor or maximum 2 floors for these Accent buildings located at the corners of in the front of a main public transport connection, regarding the average size of building in the surrounding. Higher building at the corner of boulevards should be compatible with the urban pattern of the surroundings. **12 floors in a neighbourhood of three floors is not compatible.**

• The average size of housing provision (30-35 m2/person) is comfortable, but should be **compared to the market capacity and the revenue** of the population.

Regarding parameters of the urban model, we can consider

• **Pedestrian accessibility** could be completed with cycling accessibility, another scale to be considered.

• Minimum gross building density does not seem in relation with the population density and the number of m2/person in housing units and the proposed open spaces for mobility and mix uses.

• **Population density is very high and narrow.** The range should be extended from 150 to 500 inhabitants per hectare to take into consideration the existing urban fabric (till 650 inhabitants/hectares).

• Density of road network should be a **maximum,** to reduce the place of cars in the city.

• Principles should be adopted for the **mesh of boulevards.** One boulevard of 40 meters including pavement every 2 km with dedicated lanes for public transportation in each direction; one secondary street of 25 meters every 500 meters, including pavements, with dedicated lanes for cycling in each direction.

• **Tree planting** in all streets, should include small streets.

• **Parks and public gardens** should be larger than the proposed ones.

• Building setbacks should be reconsidered: no building setbacks along the main streets. Other setbacks should be considered regarding peculiarities of each urban fabric. 3 meters and 3.8 meters are not relevant.

• **Land plot size should not be regulated.** It is related to the land and real estate market.

• Maximum building heights avoid large mistakes on urban fabric. High-rise building should be attached to the average height of buildings in the surrounding: no more than 2 floors addition.

• On-street parking and % of parking inside blocks **could be reduced**. It should be estimates regarding public transportation offer, population density and revenue.

Regarding development territories with the existing types of urban fabric

• Interesting comparison of different urban fabric. Consider the diminution of width of boulevards by introducing new mobility.

Long term

• Adopt principles and develop guidelines adapted to a **larger typology of situations** regarding specificity of topography, hydrology, identity, climate and existing urban fabric. The proposed guidelines should be completed with specific guidelines on the different urban fabrics of Russian cities.

• Focus on **urban strategies better than target models.** Target models are interesting but offer limited solutions regarding the large diversity of situation in Russian cities.

• Develop **urban programming capacities** for adapted solutions to each project. Solutions cannot be applied in detail by following national standards.

• Reduce **drastically the standards for cars in central areas and on TOD** projects. Standards proposed for roads and car parks are in contradiction with the objectives to reduce pollution and upgrade quality of life.

• Introduce **principles and guidelines for the management of shrinking cities:** the proposed solutions are looking for more density in contradiction with the main trend of city shrinking in most of the Russian cities.

• Introduce **principles for the management of urban areas located on flooding areas:** flooding areas will increase due to

the Climate change. Existing and future Urban areas will be affected on larger extend than today.

• Introduce **principles for regulating real estate markets** and control investments to avoid empty towns and empty housing that are costly for utilities and facilities and have strong effect on real estate market and speculation.

• Introduce guidelines for urban heritage sites. Identity of cities is related to their monuments, urban fabrics and landscapes. The present guidelines and solutions do not take consideration of urban heritage.

• Introduce **principles for mix use urban renewal of brownfields.** Large decayed brownfields in cities represent large potential for urban renewal. They are generally well located with potential railway system that could be change into mass public transportation. The present guidelines should propose solutions for converting these areas into mix use and dense areas when relevant.

3.4 RECOMMENDATIONS 4 | CENTRAL MODEL

General recommendations

• **Prescriptive rather than prospective approach:** Language, spirit and the value added of the Guidelines would be much enhanced if they were couched in terms of what needs to be done "at a minimum" rather than imposing limits of "what can be done at a maximum".

• The principle of "mixed use" needs to be accompanied by **"mixed income"** to ensure a socially inclusive and cohesive urban space.

Short term

• Related to **maximum size** of local parks 3 hectares: should be turned into a minimum size (for example 1 hectare) and parks smaller than 3 hectares should be joined by pedestrian bridges or walkways

• Add: wherever possible, the **use of green roofing as water retention** and management facilities and urban agriculture should be encouraged.

• For health and safety reasons, better sense to isolate cycle lanes from vehicular traffic by using parking spaces along main streets as a buffer between slow mobility (pedestrian and cycles) and fast mobility

• Car sharing: recommended to **complement car sharing with sharing of parking spaces** (smart parking) and **bike sharing** to reduce amount of traffic associated with searching for parking spaces and to help ease traffic associated with the "last mile".

• Physical placement and location of educational facilities needs to be **clearly differentiated between pre-school (nursery and kindergarten), primary school and secondary school.** For pre-school, the best location is within a block, not accessible by car (except for emergency vehicles).

Blocks:

• Blocks: For **building density** (12 to 50 thousand m2/hectare) is still low and corresponds to a FAR of 1.2 to 5. Minimum recommended FAR is 3.5 or above for the central area so as to achieve the critical density that makes cities walkable, cycle friendly and vibrant.

• For Block side length: it is better to have **rectangular blocks than square blocks.** Minimum width could be 150 meters and minimal length 240 meters.

• Streets and squares: Street width in the urban core should provide **ample space for pavements** to allow for generous pedestrian space and a diversity of uses, such as sidewalk cafes, street stalls, street entertainment, etc.

• Residential buildings: Maximum storeys = 9 above ground floor. **Recommend average number of stories** in any given block = 9 above ground floor to allow for more diverse architecture.

• High-rise landmark buildings maximum 18 above ground floor: Recommend that this be translated into average of **18 storeys above ground floor** in any given block. Higher buildings should be allowed under the condition that higher stories (19 storeys above ground floor) are set back by at 3 to 5 meters from street façade. This would allow for more flexibility and more possibilities for iconic buildings in the city centre.

Medium and long term

• **Metropolitan scale and the relation between the central core** and adjacent areas and jurisdictions: highly recommended that the guidelines include a chapter on metropolitan planning coordination and governance.

• Guidelines should include the **circular economy:** A circular economy generates no waste. While this is often seen as an issue of industrial policy, the often-cited obstacles to implementation at the local level are linked to planning, most notably the manner in which infrastructure, transport and zoning are planned and designed.

• From **participatory planning to engagement** and partnerships: The future city is increasingly a city co-designed and co-produced by its stakeholders. This requires much more than just participatory planning where inhabitants and stakeholders are asked to provide their opinion or views about how their city should develop.

3.5 RECOMMENDATIONS 5 | EXTENSIONS

Short term

• Term **'Capital Construction Objects'** has been used to define stabilisation approach and shrinkage. It is suggested to provide a working definition of the term in glossary.

• The three terms **growth, stabilisation and shrinkage** are used as approaches to territorial development: need to re-write the third paragraph of page 140 (Book 1) and make clear the objectives of growth, stabilisation and shrinkage approaches as described in Book 2.

• The guidelines identifies two major Greenfield sites – undeveloped territories and territories in need of reorganisation. Though the territories in need of reorganisation includes sites of industrial enterprises planned for decommissioning, it is suggested to include **brownfield as a third category of Greenfield sites.**

Long term

• The guidelines do not itself contain a framework for mixed use development, but instead focuses on residential development, though the terms 'residential' and 'mixed use developed' are used simultaneously. The **forms of mixed-use development** could be specified and a specific target (allocation of land) for non-residential uses could be established.

• Building design should **focus on the social mix** in order to promote cohesion and interaction between different social classes in the same community and to ensure accessibility to equitable urban opportunities by providing different types of housing.

• Planning decision must conform the climate change adaptation and therefore, building design should encourage energy-efficiency housing layouts in order to enhance the thermal performance standards of new and refurbished buildings.

• The use of **building design to minimise opportunities for crime** and to increase public safety should be encouraged.

• **Housing needs assessment should be a core part** of research and analysis and identify the types of residential units and the range of tenures.

• Further more, to include a chapter on the **'Project Development and Implementation'** in Book 1, summarising the information given in Book 5 and 6.

• **'Efficient use of land'** should be included as a priority of standard.

• The list of principles of standard described in Chapter 1 (page 21) should include **'comfortable and affordable housing' instead of 'comfortable housing' only.**

• Mixed-use projects typically require several iterations until the best fit is found. It should have several alternatives measures to be developed and tested against each other.

• For creating a profitable project, the development strategy must synchronise the phasing and timing of each component of the project. The guidelines do not offer any time framework (maximum or minimum project duration).

4 CONCLUSIONS

The thorough review of the Book indicates a long list of identified short, medium and long-term recommendations; those are indications where STRELKA KB can evaluate and take into account according to the priorities.

For a full understanding of the proposed recommendations, it is recommended to read all Appendixes as most of the recommendations are related to the discussion.

The Expert team is ready to give more explanations and sources if evaluation points are not understandable or clear.

APPENDIX A

This **APPENDIX** includes the **Expert discussions reports** of the 5 Parts of the Book "Integral Guidelines for urban territories". The 5 contributions have to be considered as discussion papers, which are the reference for the review recommendations.

A1 Priorities, principles and target models (expert Derek Martin)

A1.1 Introduction

Part 1 sets out the priorities and principles and presents three 'target models' to be applied in each of the three distinguished "models" – urban, suburban and central – for residential and mixed-use development areas in the Russian Federation.

It follows on from a section that provides a succinct but very significant overview of the present-day problems confronting urban territories in the Russian Federation. This is a brief but data-rich summary of, in its own words, "complex analysis" of problems ranging from the shortcomings of service facilities, through inadequate accessibility and unattractive public spaces to inadequate housing and high levels of pollution.

In other words, this analysis is the starting point for setting up the Guidelines and for the application of the principles and priorities. From the figures and data it shows, two important conclusions can be drawn:

- The challenge is enormous and long-term
- There is an honesty and seriousness to making the Guidelines and to taking on this challenge.

The priorities and principles have to be assessed in this light.

A1.2 Priorities and principles

On the face of it, both the priorities and principles are perfectly acceptable and logical, both following internationally established norms and objectives from the UN, WHO and OECD and focussing on the challenges specifically facing the Russian Federation. However, the reference to these international norms and fundamental objectives is very superficial. More could be said at the level of the objectives themselves. This may be the reason why such important internationally recognised principles as the affordability of housing are largely passed by.

The three **priorities** are long-term and therefore necessarily very broad. Two are clear, logical and arguably unavoidable: **improving the quality of life** of citizens and ensuring the **resilience** of cities to expected (e.g., climate) and unexpected (e.g., disasters, economy) changes. The third is more clearly consciously chosen as a primary line of future policy: promoting the **freedom of daily lifestyle choice** of citizens.

Each of these three broad priorities are broken down into a number of specific components.

So, **improving the quality of life** will be measured against material well being, especially the availability of (presumably affordable) housing and services, physical well-being (security and safety), the availability of safe public spaces and the provision of conditions for the promotion of social interaction.

In implementing this priority in practice, **five fundamental and interlinked principles** will be applied to the development of residential and mixed-use areas. It needs to be stressed that they are inherently interlinked and mutually supportive, so will only be effective if applied together. This fact exposes the omission of any reference to the need of clear planning processes, good planning coordination and governance. Without a clear objective of inter-sectoral coordination, backed up by longer-term urban strategies, there is a high risk of many of the aims and objectives not being fully or effectively implemented.

Functional diversity

At the heart of this principle is the desire to bring different functions geographically closer together in order to increase the critical mass for public/social and economic/private services and decrease motorised traffic. A principle, which is not easily translated into direct policies, but one for the (very) long term.

Density and the human scale

Clearly functional diversity is not possible without the fundamental need to increase population and residential density. It is not clear which level of density would enable the goals of better services and accessibility to be achieved and at the same time be acceptable to the majority of citizens. It is therefore good to stress the need for a compactness of developments at a "human scale" (which has been defined rather technically in the glossary as "the ratio of the volume of buildings and the size of open urban spaces that is most comfortable for a human being"). Higher density does indeed not mean there can be no open spaces for social interaction; on the contrary. However, the open spaces have to be located and designed in such a way that their daily use is automatic, otherwise they become unsafe areas instead of areas for social interaction.

Connectivity and ease of movement

This is again a principle that is beyond question but also very long-term, easier said than done and is again dependent on the density factor. In addition, is it possible to have similar standards for every climatic zone in Russia? It is rather simple to state that better pedestrian and bicycle infrastructure and better public transport will automatically lead to a reduction of the need for parking places. Experience elsewhere has shown that this is not the case.

Health and safety

The reduction of traffic, the placing of speed reduction facilities and making roads narrower or easier to cross are laudable but will only be effective if the behaviour of motorists is also changed to become less aggressive. Urban policies are not only a question of design, but also of influencing social behaviour. The safety of open public spaces is again only assured if located and designed in such a way that their daily use is to a large extent guaranteed.

Comfortable housing

The Soviet era is well known for its massive, monotonous residential blocks. These are the opposite of the 'human scale', and limiting the number of apartments per block is a good principle. The Guidelines show a sense of forward-looking and recognition of the fact that the composition and forms of modern society are fundamentally changing, leading amongst other things to a greater variety of housing forms and needs. Again comfortable housing has little sense if it is not affordable.

The second broad priority is ensuring **resilience.** This has four components:

- Economic (e.g., creating spatial conditions to promote the development of small and medium enterprises),
- Social (e.g., promoting educational, medical and leisure activities in neighbourhoods),
- Institutional (accessible local government) and
- Environmental (e.g., promoting renewables, the rational use of land).

In preparing for resilience, one is inherently dealing with a high degree of uncertainty. The main (and 6th) principle in implementing this priority is therefore logically the need for **flexibility and adaptability**. The two main proposed methods – applying a parcel-by-parcel planning approach and a greater flexibility of architecture – could indeed be ways to help absorb unforeseen social and economic developments. However, these are really quite limited and 'technical' methods. The level of flexibility and adaptability needed to prepare adequately for resilient cities can only be found in the planning process itself. This has to find a solid balance between on the one hand clear legal standards and on the other flexible decision-making processes and procedures to enable adaptation to new circumstances. This in turn is a question of flexible governance.

Moreover, little is said about the all-important need to prepare for climate and other environmental changes, which will hit the Russian Federation like all other parts of the world, quite possibly in the form of sudden disasters. Little or nothing is said about increasing resource efficiency, including land as one of those resources, which could help mitigate the chances of such disasters. Put simply, the impression is that there is insufficient attention being paid to the all-important environmental issue.

The third priority, **freedom of lifestyle choice,** will be encouraged by offering a variety and choice in five key components of daily life:

• Housing types: again affordability, which is the greatest limiting factor to freedom of choice, is largely ignored

• Transport and daily movement facilities: the inherent preference for the car by the majority of citizens, even for shorter distances, is ignored

• Locations of work and employment relative to places of residence,

• Locations of areas of public and commercial consumption (shopping, retail) relative to places of residence

• Places for recreation and leisure.

In the developed world, society has in recent years become more diffuse and socially fragmented, not only in terms of ethnicity and religion but also of income and opportunity. To offset this trend and avoid excessive social disharmony in cities, **social inclusion** has been internationally recognised as an important principle in urban planning. This is missing. Freedom of lifestyle choice can only be achieved if the great majority of citizens are actually in a position, financially and socially, to take the opportunities offered to them by good urban design directed towards the above five components.

A1.3 Target models

In order to apply these priorities and principles in practice, a distinction has been made between 'suburban', 'urban' and 'central' areas, the fundamental difference between them being a question of (increasing) building density and the quantity of public and commercial infrastructure per given amount of space. For each category, a 'target model' has been made, each with its own set of functional planning parameters and volume-spatial solutions, the most important being pedestrian accessibility (comfortable walking distances), creating functional 'walkable' spaces of 15 hectares in central areas, through 26 hectares in urban areas to 55 hectares in suburban areas. These three target models are of particular significance for the implementation of the above five flexible "components of daily lifestyle" in each of the three sorts of residential and mixed-use areas which are the subject of these Guidelines. They establish target indicators, or, as the chosen name suggests, 'standards' for the planning of different elements in the urban landscape, such as residential blocks, streets, squares, open spaces and public and commercial services.

If one term could sum up the approach and the central objective, then it is making the Russian city more compact. Considering the present-day situation to be found in the residential and mixed-use areas of most Russian towns and cities, more compact urban settlements are a laudable long-term goal to strive after.

However, there is a social component but it is not particularly elaborated, with important principles such as social inclusivity, active citizen participation and co-ownership getting no real attention.

There is only a rather indirect economic component, and an absence of clear economic and financial considerations; how will the plans be financed and what will be the long-term economic development strategy model for the cities.

Both components are really quite secondary in what is essentially an urban design approach. This approach is very structured, technical and quantitative. Although the one explicit principle, flexibility and adaptability, forms one of the basic principles, it seems to be to a large extent only applicable within the confines of the proposed methodology.

However broad and potentially all-encompassing the priorities and principles are, the fact remains that the Russian Federation is so vast, including so many (and extreme) climatic zones and geographical characteristics, that it is almost inconceivable that the proposed methodology can be applied in the same way in all suburban, urban and central areas of the country. In this light, the principle of flexibility and adaptability would seem probably the most important one, to be adopted not only for ensuring a degree of urban resilience, but in general terms across the vast geography of the Russian Federation.

A1.4 Recommendations

To sum up the above in the **form of recommendations at the general level of priorities and principles:**

• 'Guidelines' is a more apt term to use for this work as it offers far more flexibility of implementation. 'The Standard' seems rather inappropriate for a country with such a huge variety of geography and climate as the Russian Federation.

• References to international norms and objectives could be done more at the level of the objectives themselves and not just a brief general reference in the introductory text.

• More explicit emphasis could be placed on the mutual interdependence of the principles and necessity of applying all of them together in practice.

• The distinction into three target models carries with it the danger of them becoming too distinctive, separate and disjointed. An overlying urban concept would in this respect be useful to tie them together.

• Urban strategies could be adopted to provide a general and flexible direction for the longer-term implementation of the Guidelines.

• More attention could be paid to the need for clear planning processes, good planning coordination and effective local governance.

• More consideration could be given to the economic and financial considerations of implementation; how will the plans be financed and how do they link into local economic development plans.

• The social component – inclusivity, participation, and affordability, especially of housing - could be strengthened.

• Influencing changes in human behaviour could also be a focus of policy; urban design alone is in many cases insufficient to bring about the desired changes.

• Resilience to climate change and environmental degradation could be emphasised and elaborated more at the level of priorities.

A2 Suburban model (expert Nataša Pichler-Milanovic)

A2.1 Objective of the report and approach to the work

The aim of the report is to present the evaluation of the Book 1: I**ntegral Guidelines for Urban Territories: A Set of Principles for the Integrated Development of Urban Areas** in general and **Part 2 (Suburban Model)** in particular, and to formulate the recommendations and remarks for the improvements of the proposed "Standards" (i.e. Guidelines).

Integral Guidelines for Urban Territories is a set of **Guidelines** documents: Book 1 (English summary), Book 2- 6 with Catalogues (In Russian) defining the main approaches to the formation and development of residential and mixed-use areas in correspondence with the needs and demands of residents, while taking into account the peculiar characteristics of development in Russian cities and the best international practices in the formation and transformation of the urban environment. The **Guidelines** covers territories for residential and mixed-use development and does not apply to other areas such as: business centres, university campuses, stadiums, technology parks, museum quarters, manufacturing areas, hospitals, etc.

The **Guidelines in Book 1 Part 2 (Suburban Model)** covers various spheres of the spatial development of (sub)urban areas: a) formation of new housing developments on greenfield sites, b) transformation of the territories of existing housing developments, and c) the improvement of pub¬lic urban spaces.

While evaluating the **Guidelines** and formulating the recommendations, the Expert took into consideration the following aspects of provided information:

• The urban development problems, the planning context in Russia (Book 1 - 6, and Catalogues 1_1, 1_2, 2) – the Guidelines.

• Global contexts (i.e. current development at the international level, i.e. OECD, UN, EU level), situation in different European countries including best practices / examples from different urban areas in Europe, USA, and around the world.

The Guidelines are prepared for professionals i.e. architects, urban designers and planners, investors, and local administrations dealing with improving the quality of the built environment and housing all over Russia, irrespective of geography, location and size of urban areas. The Book 1 (English version) which was reviewed represents the general concept, vision and approach to the particular problem(s) while Books 2-6 and catalogues suggest practical solutions on their implementation.

The Guidelines are taking in consideration some new challenges for urban development in the 21st century – especially the importance of market forces, and provide extensive recommendations and visualisation of different options and solutions for improvement of urban areas. The Guidelines will definitely contribute to a better and more sustainable urban development in Russia in the future.

A2.2 Brief overview of the problem which the work is devoted to from the point of view of particular Expert

The **Guidelines** refer to the new approach of urban planning and focuses on densification and connectivity, in order to reduce the impact of urban sprawl. It proposes mix uses to reduce distances to facilities, urban services, jobs, commerce and recreation, and the need of mobility. It facilitates the completion of urban forms with a diversification of housing types with intention to introduce more social mix.

Traditional suburban areas in Russian cities are represented with a low density residential urban fabric — formed by detached private houses of different age, quality and size including territories with historical detached buildings, as well as rural, dacha and contemporary new types of detached houses,

urban villas, row houses and different size of multi-dwelling buildings as in-fills in existing suburban areas and new housing developments on greenfield sites. The **Guidelines** provides a very significant overview of the problems confronting (sub)urban territories ranging from the shortcomings of service facilities, inadequate accessibility and unattractive public spaces to inadequate (and old) housing and high levels of pollution. These analyses are the starting point for setting up the Guidelines and for the application of the principles and priorities in suburban areas of different Russian cities.

The purpose of the Guidelines is to develop recommendations for the formation of a coherent urban environment and improve the quality of life of citizens. The Guidelines tries to harmonise the requirements of various spheres of regulation, such as health and safety norms, sanitary and epidemiological well-being, urban planning activities, site layout and development, etc. Proposals and scenarios are being developed in order to improve the existing regulatory framework for residential and mixed-use development in (sub)urban areas of Russian cities. The Suburban Model provides detailed elements that could consider as references for local planners. However, it is limited to specific solutions that can create a similar effect to the existing **standardisation** of the urban fabric. Many European countries are adopting national (and regional) spatial and urban (local) strategies, leaving the details to local authorities and various planning documents dedicated to specific local contexts. Local projects with urban programming dedicated for particular project will define appropriate density, the urban form, greening of territory, and provision of facilities and utilities necessary for project implementation.

A2.3 The degree of relevance of the approach chosen in the work to the mentioned problem

Book 1 mentions that more than half of Russians (55.3%) consider a detached house to be their ideal home. The Suburban Model is aimed at the formation of territories with contemporary low-rise buildings, where the advantages of housing with a separate entrance for each household and their own plot of land are combined with easy pedestrian access to retail and service facilities and public transport stops. The model provides for the reduction of additional costs for the creation and maintenance of public infrastructure that arise from the relatively low density of development.

From data on Russian cities there are 318 cities (city proper) with more than 50.000 inhabitants in 2017 – but only 138 cities were declining in population between 2010-2017. There are 13 cities between 1 million – 1,6 millions, and two mega cities: Moscow (12,4 millions,) and St. Petersburg (5,3 millions) that are also federal areas, and they are all growing in population. There are many other towns (with their own suburbs) outside Moscow and St. Petersburg city boundaries located in metro areas which are also growing in population, - for example the town Balashikha, a town located just few km east from Moscow city boundaries on the motorway experienced a population growth of +109% from 215.494 (2010) to 450.771 (2017) inhabitants (!). The cities which are declining in population (and jobs) – shrinking - are smaller towns between 50.000 – 200.000 inhabitants located in Siberia, Ural, Volga, South, and Central macro-regions.

Taking these city differences in consideration it is important to distinguish them in the Suburban Model and acknowledge different position and role of suburban areas by city size, location within local demographic and socio-economic context, taking also in consideration the availability and affordability of housing, land and property market, and life style choices of different residents.

A2.4 The most important aspects revealed by the author in the work

The **Guidelines** need to promote **»sustainable urban sprawl«:** a process of urban change, which seeks to fulfil the needs of the actors demanding sprawl without inducing problematic consequences (economic, social, environmental). Some possible areas for policy development, depending upon the local (and cultural) context should address the planning policies and regulation at the regional level (oblast) with specific recommendations for the wider (functional) urban areas with commuting zones and the particular suburban areas / settlement with (personal) taxation and subsidies (fiscal & financial), especially in relation to *housing and transport.*

A2.5 General evaluation of the work (short term evaluations)

Main recommendations

• It will be useful to include a chapter on Project Development and Implementation in Book 1 (English version), summarising the information given in Books 5 – 6 (in Russian);

• It is recommended to use the term **Guidelines** instead of "Standards".

Specific recommendations

• *Development of territories according to the Suburban Model (Chapter 4)*

Hence it would be useful to develop specific parts in the Guidelines for Suburban Model adapted to typology of cities and (sub)urban areas in Russia - regarding their size, demography, morphology, location, climate, cultural identity, etc. - that could be easily followed and adopted (with modification) by regional authorities (oblast) and by individual city / local authorities.

• *Tasks of territorial development with target indicators*

Functional diversity: positioning of retail shops and services within 5 min walking distance for residents of suburban areas will be difficult to implement in each neighbourhood with a certain threshold taking in consideration the current low population density and poor service equipment. The district shopping centres could be planned and developed at the intersection of roads within several suburban areas with easy access by walking, cycling, public and private transport, with alternative **delivery of goods and services on demand** (phone, mobile applications, etc.) to customers / residents (especially old, disabled, non-drivers);

Density at the human scale: the formation of more compact developments while maintaining low building heights is possible taking in consideration current lower density of suburban areas, and preferences for detached house with a garden. **Preventing new larger low-rise high-density housing estates to be built on greenfield sites at a distance from the city centre** to avoid traffic congestion, infrastructure costs and environmental pollution;

Provision of public transport services: 30% of suburban residents using public transport on a daily basis will depend on demographic and socio-economic characteristics of residents in suburban areas, especially the number of daily jobs and school commuters and provision of **public transport** (frequency, cost) **facilities for residents** (including flexible and affordable public-private transport on demand – e.g., mini buses, linear taxis, local circle bus services, etc.);

Health and safety: ensuring view ability of streets and other open spaces from the windows of residential buildings – is possible in current situation in low density suburban areas. This could be changed if new larger multi-dwelling buildings and estates are developed in suburban areas;

Comfortable housing: creating housing with separate entrances for each household and a specific plot of land by the house (or apartment) for the majority of residents. This is already the case in many suburban areas of Russian cities. But in market situation also **affordability** of new detached houses with a private garden in particular (attractive) suburban areas is important planning issue that will need to be considered by local authorities and residents;

Flexibility and adaptability: The introduction of autonomous maintenance of utilities for each property. At the moment existing suburban areas are equipped with electricity and local roads (of different quality). The water supply system differs between suburban areas, drainage and heating are usually individually provided by owners. Using **renewable** local energy resources (with subsidies) will have positive impacts on reducing costs of infrastructure provision and services as well as environmental costs.

• *Planning and spatial solutions (Chapter 5)*

The Guidance could introduce (separate) principles for the **planning and management of growing and shrinking cities:** the proposed solutions in the Suburban Model are looking for more density that is in contradiction with the trend of shrinking of some Russian cities, especially small towns in remote and less attractive economic areas in Russia. Specific principles and solutions should be developed to support better management of shrinking cities that offer large opportunities to reshape them in more efficient and attractive ways.

The **planning structure** of the Guidelines for Suburban Model is based on relatively large blocks (1.8–5 hectares each). Such dimensions lead to the formation of a relatively low-density road network (10 km/km²), thus reducing construction and maintenance costs but increasing accessibility and costs of public and private transport. The largest blocks (of 3–5 hectares) are designed to accommodate low-rise multi-dwelling buildings of different types that can accommodate a four-storey residential building (100–150 dwellings). This type of housing could be provided on brownfields closer to the city centre and older housing estates with existing infrastructure. Smaller blocks (1.8–3 hectares) in the Suburban Model allows the positioning of small sections of row houses and detached residential buildings, each provided with separate street access with densification of existing low-density suburban areas at the city periphery.

The intensity of **pedestrian traffic** on the streets in the Suburban Model is lower than in the Urban and Central Models with the exception for main streets of district-level importance, along which is found a greater density of mix-used development (shops, services, schools, etc.) but then more intensity of motor vehicles are to be expected.

The main part of the **greenery** in the Suburban Model is located on plots adjacent to housing or along the local roads. When forming larger development blocks (50 ha and more) according to this model a local park (1–3 ha) or open green space with sport facilities that can serve as a buffer zone between different residential blocks to prevent ribbon development alongside main roads.

A **centre of urban life** (town square, garden square, a main street or part of it) is located, near public transport nodes that connect suburban areas with other districts of the city.

An important role in the (trans)formation of the Suburban Model is played by the creation of comfortable conditions for **walking and cycling.** Many local roads in current suburban areas are narrow without pavements and enough space for cycling lanes but the lane between the roads and the up-front house fences can be used for cycling and walking. On developments of detached and row house residential buildings, each household can park several cars on its own plot of land.

The model supposes the combination of different types of detached and low-rise residential buildings that allows for variety of dwellings size with different prices for residents, thus taking into consideration **affordability** issues and social diversity of suburban areas.

The length of the main **utilities** networks per resident in low-rise developments in Suburban Model is significantly higher than in any other model. In the conditions of city budget shortages, the utilities networks of such areas are often provided with availability of funds, and as a consequence are often underdeveloped especially in suburban areas with detached houses only.

Due to the relatively low building density, the radius of territorial accessibility of **schools** are determined by taking into account movement not only on foot, but also by public transport, including school buses following specially planned routes. Even though children are taken to schools by private transport to other city areas.

• *Parameters of suburban model (Chapter 6)*

The Guidelines for Suburban Model could introduce only "prescriptive" guidelines and set the minimum threshold of what could be done rather than maximum limits that cannot be easily achieved and exceeded. Good instruction and recommendations for building new residential housing and mixed-use projects in attractive suburban areas in cities with economic prosperity are necessary – for developers, architects, urban planners, etc. for preparing the local master plan on demand from investors / developers and land owners.

Residential buildings: need to be kept 1-2 stories high above the ground level in existing suburban areas and not more than 3-4 stories high in the new multi-dwelling housing developments on greenfield sites on the recommended land plots size and density;

Car parking: is provided in purpose-built garage upfront on land plots and detached houses, or inside the backyard;

Street frontage with pedestrian accessibility zone: are in need of proper design regulations for particular use and type of buildings as local area characteristics and demands;

Streets and squares: provision of payments and cycling lanes are needed alongside local roads as well as new squares and their intersection for safety of pedestrians and transport;

Green areas: are adequate in suburban areas on individual plots and alongside local roads (with planted trees) but more common green areas (parks with sport facilities) are needed as much as their connectivity and appropriate landscape design within the principles of the provision of green infrastructure;

Schools and day nurseries: their size should depend on demographic projections and (medium to long term) plans for new housing developments in particular suburban areas;

High-rise landmark buildings should not exceed 5 stories above the ground and not in number at the short distance from each other in suburban areas.

Increasing building density through development of various types of low-rise residential buildings, such as the use of **row houses and multi-dwelling buildings** are only optimal in the (attractive) suburbs in larger, growing and economically prosperous Russian cities with specific housing demand and regulated land and property market.

• *Development of territories with existing detached residential model (Chapter 7)*

As mentioned in Book 1 territories with existing development in Russian cities, detached residential urban fabric are the closest in terms of parameters of the Suburban

Model. They are mainly comprised with private (detached) houses of different size and quality built during the Soviet period, as well as new modern houses, cottages, row houses and other multi-dwelling buildings. Their share of the built-up area of Russian cities reaches about 60%, though on aver¬age no more than 12% of the total housing stock is located in suburban areas. The exceptions are found in cities where private houses have traditionally been the most popular type of housing, such in the south of Russia with small number of multi-dwelling buildings and housing estates.

Territories with detached residential urban fabric (suburban areas) are characterised by low population density and low levels of functional diversity including lower level of infrastructure facilities, with preschool, primary and secondary education facilities and health care institutions, and small grocery shops. Existing built-up suburban areas can be re-developed according to the Suburban Model, as well as new housing developments on greenfield sites and the parameters in Guidelines are used as recommended targets to achieve the aim – specially to increase the building density and the relative proportion of public and private infrastructure, the level of transport services, and improvement of open public spaces, especially streets and local roads. Suburban Model with detached residential urban fabric provides number of life style (and economic) advantages to existing and new residents, such as their own plot of land, and the ability to fully adapt their housing to individual needs and demands.

Comparison between the existing average indicators of detached residential urban fabric and recommended parameter values for the Suburban Model implies that efforts should be made by regional (oblast) and local planning authorities to achieve the values of the recommended parameters in the Guidelines for Suburban Model.

Transformation of territories with detached residential urban fabric and in accordance with the Suburban Model will depend on recommended different measures and targets (density, transport facilities, green and open spaces, local infrastructure provision, etc.) but also on the integrated planning and development capacity of local authorities, investors and land owners at the local (municipal) level and at the neighbourhood level (particular suburban areas).

A2.5 Recommendation for improvement of the work (long term evaluations)

The Guidelines are less explicitly taking in consideration the **New Urban Agenda** adopted by the UN Habitat in 2016 as a shared (global) vision for a better and more sustainable development. The Guidelines are not focusing as much on social inclusion and local economic development of particular suburban areas in different Russian urban areas. Therefore, the Guidelines could be a unique opportunity for Russian cities and local authorities and communities to attain the 2030 Sustainable Development Agenda and more specifically **Sustainable Development Goal 11.** Regarding the role and contribution of the **Suburban Model,** the following medium to longer-term issues and challenges need to be addressed:

11.1 Access for all to **adequate, safe and affordable housing** and services and upgrading of slums (low quality residential areas)

Some (smaller) Russian cities are shrinking due to population decline and residential migration towards largest cities - mainly to Moscow, St. Petersburg and other regional centres - cities with more than 1 million inhabitants with diversity of jobs, education and health services, and availability of housing. Residential mobility and suburbanisation are evident in many urban areas where inhabitants are in search of new and larg-

er dwellings of better quality but also more **affordable housing** (lower price for sqm for purchase or rent than in the central city or housing estates). Housing needs assessment should be a core part of planning research and analysis to identify the types of housing and the range of tenures that local population is likely to need in future. The Guidelines should also introduce principles for regulating real estate markets and control investments in suburban areas. Upgrading the low-quality residential buildings in older suburbs are necessary with provision of subsidies for low income owners for improving the energy efficiency and safety of individual housing constructions, including protection of cultural heritage, and the provision of local infrastructure and services by city / local authorities;

11.2 Access to **safe, affordable, accessible and sustainable transport systems** for all, improving road safety, notably by expanding public transport

Planning and developing of new transport infrastructure with land use planning taking in consideration **sustainable urban mobility** (modes of transport) while taking in consideration negative consequences (environmental, economic, social) of increased transport in suburban areas (i.e. air and noise pollution, surface sealing, ecosystem fragmentation; extensive costs of infrastructure, personal costs; accidents, increased daily commuting). Improvement of local roads and transport infrastructure together with the land use planning while considering sustainable urban mobility demands and negative consequences of increased number of private vehicles. Prevent ribbon development and clustering of new residential developments alongside roads and motorways in wider urban areas (commuter zones) with preservation of forests and open green spaces as buffer zones.

11.3 Enhance **inclusive and sustainable urbanisation and capacity for participatory,** integrated and sustainable human settlement planning and management

The modern city is increasingly co-designed and co-produced by many stakeholders. This requires much more than just **participatory planning** where inhabitants and stakeholders are asked to provide their opinion or views about how their city and local neighbourhoods should develop. Increasingly urban development depends on innovative forms of engagement and effective partnerships (i.e. participatory budgeting) with a high degree of transparency and accountability. A key ingredient of success are public-private partnerships, and public-public partnerships where consensus is reached between the public and civil society partners prior to engagement with the private and commercial sectors.

11.4 Strengthen efforts to protect and world's **cultural and natural heritage**

Natural and cultural heritages are not taken into consideration in the Guidelines (Book 1) for Suburban Model. They should be enhanced to reveal the peculiar character of some suburban areas - settlements and old villages - with traditional housing types and develop specific identity of these locations. The proposed densification of suburban areas can destroy the characteristics of these areas.

11.5 Reduce the number of **disasters, including water-related disasters,** with a focus on protecting the poor and people in vulnerable situations

Climate change could have strong impact on flooding and soil (landslides, erosion, and permafrost melting) as well as heat waves. The Guidance does not offer solutions regarding the existing built up (suburban) areas located in flooding areas and the future one's located on extensions of flooding areas due to the increase of floods. The densification of these suburban areas can increase the vulnerability of settlements. Heat waves will have more impact when density of building will increase. The proposed principles do not take into consideration the wind, the orientation of buildings and the urban design to manage better these heat waves.

11.6 Reduce the **adverse per capita environmental impact of cities,** including by paying special attention to air quality and municipal and other waste management

Territorial impact assessment (TIA) of new (re)developments according to the Guidelines for Suburban Model could take in consideration the negative consequences of:

· **Transport** (journey frequency, length and mode): increased energy consumption, air pollution by CO2, NOx, water pollution by oil, petrol, rubber etc., noise pollution, land consumption, surface sealing, and ecosystem fragmentation;

· **Density** (residential and job density): increased land consumption due to scale effects, energy use for heating (CO2), ecosystem fragmentation (loss of green areas);

· **Land conversion** (urbanisation): conversion of land with a destruction of natural habitats and green areas, deterioration of landscapes, surface sealing with impacts on runoff water and possible floods, pollution (air, water, ground, noise, light);

11.7 Provide universal access to **safe, inclusive and accessible, green and public spaces**

The **shift on emphasis** from private sphere (i.e. private gardens, shopping malls, gated communities) to public sphere (shopping streets, parks, open spaces, sports and other public facilities). Improvement of landscape design and beautification of existing suburban areas (private and public spaces) is a task of individual land and housing owners, local authorities, private investors and design recommendations.

· Support positive **economic, social and environmental** links between urban, peri-urban and rural areas by strengthening national and regional development planning

There is no reference in the Guidance to the need of specific **territorial planning coordination and governance** at the regional level (oblast) in Russia and the level of FUA (Functional urban areas). Without a clear objective of inter-sectoral coordination, there is a high risk that many of the aims, objectives and targets in the Guidelines will not be effectively implemented. The regional and metropolitan planning coordination and governance is important for sustainable development of different residential and mixed-use urban areas: central city, old and new housing estates, various mixed neighbourhoods, (old) villages and other new housing developments on greenfield land or as in-fill in existing suburban areas at the city periphery.

· Adopting and implementing integrated **policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience** to disasters

To develop integrated policies and plans and implement institutional capacity for "smart growth coalition" based on sustainable urban development principles with new circular economy demands, green and blue infrastructure, social inclusion, and resilient city and local governance.

· Support least developed countries, financial and technical assistance, in **building sustainable and resilient buildings utilising local materials**

Construction or refurbishment / upgrading of good quality and resilient buildings utilising local materials should be taken into consideration especially in connection with efforts to protect the **cultural** and **natural heritage** in specific suburban areas (including old villages) specially in less populated regions in Russia.

A3 Urban model (expert Eric Huybrechts)

A3.1 Brief overview of the problem, which the work is devoted to from the point of view of particular expert

New urban standards to adopt at the national level will facilitate the work of civil servants in charge of urban planning and design. Too much pressure is coming from investors who have strong power in negotiations. New guidelines will clarify the way to develop cities for a better quality of life, resilience of urban territories and easing choices for citizen of the lifestyle they want.

These standards are also necessary to take into consideration the new challenges for urban development. These challenges relates to the New Urban Agenda adopted by UN-Habitat. There are based on several concerns that have been identified in the development of Russian cities and settlements: low densities, growth of car dependency, accessibility for jobs, commerce, facilities and recreation, cost of utility networks, urban sprawl, pollution, lack of greenery and public spaces, lack of public transportation, social mix due to housing offer...

The new approach of Russian urban planning requires principles to adopt at the different scales, from the city to the neighbourhood and the public space levels. It is a holistic approach creating relations between the different scales, offering solutions for the different typologies of urban areas in the cities and settlements of the Federation. This will facilitate the preparation and the evaluation of urban planning and urban design projects for neighbourhoods and public spaces.

A3.2 The degree of relevance of the approach chosen in the work to the mentioned problem

The proposed principles and standards refer clearly to the new approach of urban planning adopted by UN-Habitat. It focuses on densification and connectivity, using TOD principle, to reduce the impact of urban sprawl. It proposes mix uses to reduce distances to facilities, urban services, jobs, commerce and recreation, then to reduce the need of mobility. It facilitates the completion of urban forms with a diversification of housing types to introduce more social mix.

The proposed standards for suburban, urban and central areas provide detailed elements that could consider as references for planners. However, it is limited to specific solutions that can create a similar effect to the existing standardisation of the urban fabric. In fact, there are many more solutions for reaching the goals and applying the proposed principles. Several countries give up these types of standards and consider more important to adopt principles and urban strategies, leaving the details to local authorities and documents dedicated to specific local contexts. Local project or urban programming dedicated for each project will define the density, the urban form, the greening, the facilities and utilities necessary for the implementation.

If several concerns are clearly pointed, there are other important challenges that are not enough taken into consideration:

• Climate change will have strong impact on flooding and soil (landslides, erosion, and permafrost melting) and heat waves. The proposed solutions doesn't offer solutions regarding the existing built up areas located in flooding areas and the future one's located on extensions of flooding areas due to the increase of floods. The densification of these areas can increase the vulnerability of human settlements. Heat waves will have more impact when density of building will increase. The proposed principles don't take into consideration the wind, the orientation of buildings and the urban design to manage better the temperature and the hygrometry to better manage the heat waves.

• Most of Russian cities are shrinking due to population decrease and residential mobility towards the largest cities (mainly Moscow). The main points retained from

the diagnosis do not refer to the territorial management of shrinking cities. How to manage utilities and facilities with lower densities? How to take opportunities of decayed areas to reshape cities to create missing continuities for road network, drainage system (regarding flooding challenges) and landscapes? Book to refer to strategies for shrinking cities, but the proposed principles and design of book 1 offer solution for urban densification, but not for opportunities to restructure cities with new large land opportunities (for example for reconsidering nature in the city).

• The changes in the economy had a large impact on the industrial sector where large land opportunities can be mobilised for urban renewal. Some of them are very well located inside urban areas, at the proximity of railways that could be transformed into mass public transportation. These land opportunities are clearly the location for TOD projects, dense areas, and mix use neighbourhoods. However, to renew these areas, some specific process should define regarding land ownership, soil pollution, and relation with the surrounding neighbourhoods.

• The relief is not taken into consideration. All principles are applied on flat areas. It doesn't consider the effect of relief on drainage, the management of slopes for the built environment, the sensitive locations that can have strong impact on urban landscape, the continuity of landscapes, the views to be preserved regarding peculiar natural areas

• Nature of soil can have also an impact on the capacity to densify the areas: polluted soils, specific soils that reduce the potential densification.

• Natural and cultural heritages are not taken into consideration. How the existing urban fabrics could be considered as heritage of the 20th century? How they should be enhanced to reveal their peculiar character and develop specific identity of these locations? How to preserve their surroundings to avoid non-relevant urban development around heritage urban fabric? The proposed densification of the urban fabric can destroy the characteristics of these areas.

A3.3 The most important aspects revealed by the author in the work

Book 1 presents clearly the main challenges cities are facing in Russia. It is a selection of challenges, resulting to a comprehensive diagnosis, presenting priorities for urban changes. The gap to reach a more integrated urban development is large and documented. The priorities given to high quality of life, resilience and lifestyle choice are presented with their different components. They are translated to principles for the standards with a coherent articulation between them. The separation in target models for suburban, urban and central areas of cities define categories that will be difficult to define clearly.

The most important thing is the interrelations between the different components of the city. Compact city, densification, mix uses, accessibility, greenery are intertwined and participates to quality of life, resilience and adaptation of cities regarding economic and environmental crisis. The principles adopted by the document show an important shift in the approach of urban planning in Russia, for the benefit of the inhabitants and users

A3.4 General evaluation of the work (short term recommendations)

It is an impressive work regarding detail design for public spaces and neighbourhood levels in the different books. It provides peculiar solutions to apply.

Regarding the Development of territories according to the urban model (chapter 8), we can consider:

• The diagnosis focuses mainly on the housing offer, mainly on affordable housing.

• The aims of territorial development are covering functions, densities, connectivity, health/safety, housing and mix uses. The approach does not care with natural risks.

• Target indicators are over estimated: more than 50% for roads and public transport is in contradiction with the reduction of the car needs. For example in Paris, roads and sidewalks are covering no more than 25%. Generally, we use 40% to 50% for public domain, including green spaces and public facilities. More than 50% of two and 3 room apartments refer to size of households and economic capacities. It cannot be apply in all urban fabric in Russia. 50% for residential areas is very low for urban areas, but it cannot be apply as a target indicator due to the different economic activities in cities. For example, industrial cities will have another pattern that depend of the type of activity.

Regarding the Planning and spatial solutions (chapter 9):

• Principles for continuous building frontage along the main streets, public and commercial infrastructures on the ground floors, developed network of cycle paths and pedestrian movements, green areas within 5 minutes accessibility are positive proposal to upgrade urban areas.

• The question of recreational functions of schools to adjacent parks should be analysed in detail, regarding the users of these parks, the size, and the capacity to be used for this purpose.

• The various types of buildings in residential blocks could be interesting if it is well designed by architects and not an opportunity for developers to develop non-relevant projects in residential areas (i.e. towers in the middle of single houses). Higher building at the corner of boulevards should be compatible with the urban pattern of the surroundings. 12 floors in a neighbourhood of three floors is not compatible.

• Linear planting along street contribute to the qualification of the public spaces. The continuity of green spaces crossing blocks could be introduced. Greenery on the roofs and lower proofing in the parcel (less soil sealing) should also be adopted.

• Car parks standards should be reduced near metro, BRT and train stations.

• Size of blocks differs if they have public facilities and the type of plots and buildings. A preference for larger blocks reduces the costs for road maintenance and offer more opportunities to develop space for pedestrian and cycling paths.

• High frequency of ground level pedestrian crossing shows the priority to give to the pedestrian when designing cities.

• A principle of large boulevard (40 meters wide) every 2 kilometres to be able to accommodate mass public transportation should be a target for urban areas.

• Built frontage on street/plot alignment at 90% is interesting, but should be adapted to the peculiar situation of each urban pattern.

• The public parks should be not only located at less than 5 minutes distances walk, but also have enough space for inhabitants located in its surroundings. Larger population should have larger parks. The limitation to the size of parks and gardens is not relevant. For example, Park du Luxembourg in Paris has 25 hectares, and Central park in the central part of Manhattan islands in New York has 320 hectares. These standards should be largely reconsidered. Large parks in urban areas could be a strong asset for cities.

• 50% of movements by public transportation is very high. It is possible when the density of public transportation exist. It is only the case on very dense urban areas, and when very high level of investments have been implemented for public transportation. This figure should be reconsidered.

• The maximum size of land plot (0.9 hectares) is not necessary. Flexibility could be found in very large blocks. Better to adopt principles for fragmentation of building than size of plots.

• The number of floors (between 3 to 8) proposed and the accent building at 12 floors are not intertwined. This could have strong impact in the environment. Better to have only an addition of one floor or maximum 2 floors for these Accent buildings located at the corners of in the front of a main public transport connection, regarding the average size of building in the surrounding.

• The average size of housing provision (30-35 sqm/person) is comfortable, but should be compared to the market capacity and the revenue of the population.

• More flexibility is done for ground floor apartments regarding terraces.

• Mix use at the scale of blocks, with recreational activities is fostered. On the same multi functions for public facilities will offer more opportunities for public services to the inhabitants and users.

Regarding parameters of the urban model, we can consider:

• Pedestrian accessibility could be completed with cycling accessibility, another scale to be considered.

• Minimum gross building density does not seem in relation with the population density and the number of m2/person in housing units and the proposed open spaces for mobility and mix uses.

• Population density is very high and narrow. The range should be extended from 150 to 500 inhabitants per hectare to take into consideration the existing urban fabric (till 650 inhabitants/hectare)

• Density of road network should be a maximum, to reduce the place of cars in the city.

• Principles should be adopted for the mesh of boulevards. One boulevard of 40 meters including pavement every 2 kilometres with dedicated lanes for public transportation in each direction; one secondary street of 25 meters every 500 meters, including pavements, with dedicated lanes for cycling in each direction.

• Tree planting in all streets, including small streets.

• Parks and public gardens should be larger than the proposed ones (0.8 and 0.5 hectares).

• Building setbacks should be reconsidered: no building setbacks along the main streets. Other setbacks should be considered regarding peculiarities of each urban fabric. 3 meters and 3.8 meters are not relevant.

• Land plot size should not be regulated. It is related to the land and real estate market.

• Maximum building heights avoid large mistakes on urban fabric. High-rise building should be attached to the average height of buildings in the surrounding: no more than 2 floors addition.

• On-street parking and % of parking inside blocks could be reduced. It should be estimates regarding public transportation offer, population density and revenue.

Regarding Development territories with the existing types of urban fabric:

• Interesting comparison of different urban fabric. Diminution of width of boulevards by introducing new mobility.

• Positive clarification of public and private spaces through disaggregation of blocks and clearer occupancy for parks, public facilities and other usage.

• Densification by filling the gaps and introduction of new housing typologies and other land use (commerce…).

The principles are positive regarding the main objectives. The application at the neighbourhood level does not take into account the area in its surroundings (green connections, flooding, large landscapes).

A3.5 Recommendation for improvement of the work (long term)

• Adopt principles and develop guidelines adapted to a larger typology of situations regarding specificity of relief, identity, climate and urban fabric. The proposed guidelines should be completed with specific guidelines on the different urban fabrics of Russian cities.

• Focus on urban strategies better than target models. Target models are interesting but offer limited solutions regarding the large diversity of situation in Russian cities. It is more important to adopt urban strategies and then introduce specific solutions well adapted to the economic, social and environmental situation and challenges.

• Develop urban programming capacities for adapted solutions to each project. Solutions cannot be applied in detail by following national standards. It is better, to base on urban strategies and then define peculiar urban programming regarding specific projects.

• Reduce drastically the standards for cars in central areas and on TOD projects. Standards proposed for roads and car parks are in contradiction with the objectives to reduce pollution and upgrade quality of life. Car place and occupation in the city should be reduced.

• Introduce principles for the management of shrinking cities: the proposed solutions are looking for more density in contradiction with the main trend of city shrinking in most of the Russian cities. Specific principles and solutions should be developed to support better management of shrinking cities that offer large opportunities to reshape cities in ways that are more efficient.

• Introduce principles for the management of urban areas located on flooding areas: flooding areas will increase due to the Climate change. Urban areas will be affected on larger extend than today. New objectives and guidelines should be developed to offer solutions for managing these areas.

• Introduce principles for regulating real estate markets and control investments.

• Introduce principles for urban heritage sites. Identity of cities is related to their monuments, urban fabrics and landscapes. The present guidelines and solutions do not take consideration of urban heritage (but urban character is considered) that is crucial for the economic development and the position of cities in the global competition. Specific guidelines and solutions for urban heritage protection should be proposed.

• Introduce principles for mix use urban renewal of brownfields. Large decayed brownfields in cities represent large potential for urban renewal. They are generally well located with potential railway system that could be change into mass public transportation. The present guidelines should propose solutions for converting these areas into mix use and dense areas when relevant.

A3.6 References to some recognised research papers or projects similar in approach to the presented work or that are addressing similar problems

France CAUE offer adapted urban guidelines to the different context in urban and rural areas: http://www.fn-caue.com/dossiers-thematiques/urbanisme/

EUA, Abu Dhabi adopts several urban guidelines in the frame of Estidama considered well advanced: https://www.dpm.gov.abudhabi/en/Urban-Planning/Estidama-Program

UN-Habitat adopted International guidelines for Urban and territorial planning: https://unhabitat.org/books/international-guidelines-on-urban-and-territorial-planning/

A4 Central model (expert Nicolas You)

A4.1 Introduction

Part 4 is devoted to the "Central Model" namely what should happen in the core of the city centre as opposed to its outlying urban and suburban areas.

A4.2 Overview

The guidelines, as a whole, embody the principles of compact, transit-oriented urban development. This is a very positive step and needs to be recognised as a major step forward. This is evidenced by the stated aims of:

(a) Functional Diversity (mixed use)

(b) Density and human scale

(c) Connectivity and ease of movement (walkability)

(d) Flexibility in the use of premises and buildings

Despite these stated aims, there are a few important issues that need to be addressed in the guidelines. These include specific as well as general issues.

A4.3 General issues and comments

Prescriptive rather than proscriptive approach

The guidelines provided in Part 4 lean towards the proscriptive (what you are not allowed to do) rather than the prescriptive (what you are allowed to do) approach to planning. Sustainable urban development is increasingly a "negotiated outcome" between competing demands and priorities. For this "negotiated outcome" to be economically and financially viable, ecologically sustainable and socially acceptable (in the inclusive sense), there has to be a "space" where issues and priorities of different stakeholders can be discussed and where trade-offs can be forged (see Section E.4: participatory planning and partnerships).

This requires an increasingly prescriptive planning and legal environment where guidelines, be they in land use planning, transportation planning, building codes and regulations are designed with considerable flexibility in mind. In practical terms, prescriptive guidelines set the minimum threshold of what should be done rather than maximum limits or standards that cannot be exceeded.

Recommendation: For Book 4 (and other parts), the language and spirit and the value added of the Guidelines would be much enhanced if they were couched in terms of what needs to be done "at a minimum" rather than imposing limits of "what can be done at a maximum".

A typical example is Floor Area Ration (FAR) or density. Prescriptive guidelines for a compact transit-oriented urban development could set the minimum density to be attained rather than the maximum density allowed.

Social equity

The guidelines make ample reference to a dense, mixed use and walkable urban fabric. These are very good principles but need to be complemented by guidelines on social equity and income diversity within each neighbourhood. This is critical to prevent entire areas or sub-districts of the city becoming gentrified or impoverished over time – constituting "virtual barriers" to the desired aim of connectivity, mixed use and diversity. This is becoming a critical issue for many cities around the world as the people who make cities great (those who provide education, health, sanitation and social welfare services) can no longer afford to live in central areas. This in turn precipitates urban sprawl and loss of diversity in the urban core. While planning guidelines alone cannot solve this problem, they have an important role to play.

Recommendation: The principle of "mixed use" needs to be accompanied by "mixed income" to ensure a socially inclusive and cohesive urban space. This is especially important when it comes to housing. The guidelines make reference to favouring small residential units (25 to 30 m2 floor space per person). This needs to be complemented by minimum thresholds of affordable housing within each block or set of blocks.

A4.4 Specific comments – short term

Page 108, para. 5 states: The maximum size of local parks is 3 hectares, and garden squares can cover up to 0.2 hectares.

Recommendation: This is an example of proscriptive rather than prescriptive approach. I recommend that this be turned into a minimum size (for example 1 hectare) and parks smaller than 3 hectares should be joined by pedestrian bridges or walkways that make for a continuum of green spaces cutting across zones and districts.

Page 109, para. 7, re: green roofs.

Recommendation: Add: wherever possible, the use of green roofing as water retention and management facilities and urban agriculture should be encouraged.

Page 110, para. 14, re: cycle lanes: Cycle lanes are isolated from the pedestrian area of the pavement on the main streets of district level importance as well as secondary streets …"

Recommendation: For health and safety reasons it makes better design sense to isolate cycle lanes from vehicular traffic by using parking spaces along main streets as a buffer between slow mobility (pedestrian and cycles) and fast mobility (cars, trams, buses, etc.)

Page 111, para. 17: "the pent-up demand for car use is met by car sharing services and taxis…"

Recommendation: car-sharing is a first step, it is also recommended to complement car sharing with sharing of parking spaces (smart parking) and bike sharing to reduce amount of traffic associated with searching for parking spaces and to help ease traffic associated with the "last mile".

Page 113, paras 27-32: educational facilities

Recommendation: The physical placement and location of educational facilities needs to be clearly differentiated between pre-school (nursery and kindergarten), primary school and secondary school. For pre-school, the best location is within a block, not accessible by car (except for emergency vehicles). This will encourage parents to walk their children to school rather than drive them to school.

The same principle should apply to primary school (up to age 12). Access by car should be strictly limited to encourage primary school children to walk or bike to school. Safety is of primary concern that requires careful attention to urban design, pedestrian crossings and cycle lanes.

Secondary schools can be located on the perimeter of blocks, easily accessible by public transport. But again, access by car should be limited for both teachers and students with strictly no parking spaces on or in vicinity of the premises of the school.

In summary, the planning guidelines should include urban design principles that provide a safe and secure alternative to parents dropping off or picking up children by car. They should also discourage to the maximum extent possible teachers and higher-grade students from driving to school.

Pages 115-119, parameters of the central model, re: Blocks

Recommendations: *Blocks:* For building density (12 to 50 thousand m2/ha) is still low and corresponds to a FAR of 1.2 to 5. Minimum recommended FAR is 3.5 or above for the central area so as to achieve the critical density that makes cities walkable, cycle friendly and vibrant.[1]

For Block side length: it is better to have rectangular blocks than square blocks. Minimum width could be 150m and minimal length 240m.

Streets and squares: Street width in the urban core should provide ample space for pavements to allow for generous pedestrian space and a diversity of uses, such as sidewalk cafés, street stalls, street entertainment, etc.

Residential buildings: Maximum storeys = 9 above ground floor. Recommend average number of stories in any given block = 9 above ground floor to allow for more diverse architecture.

High-rise landmark buildings maximum 18 above ground floor: Recommend that this be translated into average of 18 storeys above ground floor in any given block. Higher buildings should be allowed under the condition that higher stories (19 storeys above ground floor) are set back by at 3 to 5 meters from street façade. This would allow for more flexibility and more possibilities for iconic buildings in the city centre.

A4.5 Additional recommendations for the medium to long term

The planning guidelines provide a unique opportunity for Russian cities and communities to attain the 2030 Sustainable Development Agenda and more specifically Sustainable Development Goal 11. Regarding the role and contribution of the "Central Model", the following medium to longer term issues and challenges need to be addressed:

Metropolitan scale and the relation between the central core and adjacent areas and jurisdictions

One of the obstacles for urban sustainability is the competing or overlapping jurisdiction syndrome whereby adjacent municipalities or communes have competing or contradictory laws, by-laws and rule and procedures. This allows for "disjointed" development to occur and compromises a systemic approach in terms of use of land and natural resources. It is highly recommended that the guidelines include a chapter on metropolitan planning coordination and governance. This is especially important for transit-oriented development to become a reality, as it requires carefully coordinated and mutually supportive measures for realising a cohesive transport/mobility and land use system across the entire metropolitan area. Similarly, such coordination is required for energy, water, waste, and green and recreational spaces. A coordinated metropolitan approach to infrastructure and services planning would enable the city as a whole to become more sustainable and resilient. Typical examples include a coordinated approach to green and recreational spaces, road infrastructure and block design to retain and make good use of storm water, prevent flooding and/or drought, and enhance biodiversity.[2]

Towards a circular economy

A circular economy generates no waste. While this is often seen as an issue of industrial policy, the often-cited obstacles to implementation at the local level are linked to planning, most notably the manner in which infrastructure, transport and zoning are planned and designed. As global trends towards distributed systems for energy, water and food production and waste management continue, the future city becomes a myriad of centres of production, consumption, recycling and reuse. Metropolitan coordination and urban planning need to take into account how they facilitate or inhibit the realisation of the circular economy. A good example is the farm-to-fork back-to farm loop that minimises food waste and food miles and provides for better nutrition, health and well-being. Implementing such a strategy requires a concerted effort by all departments at all tiers of government

in design, implementation, monitoring and evaluation.[3] The same goes for energy, water, waste and transport, three key yet interdependent areas of infrastructure that have heretofore been planned independently of one another and need to be planned and managed synergistically going forward.[4]

From participatory planning to engagement and partnerships

The future city is increasingly a city co-designed and co-produced by its stakeholders. This requires much more than just participatory planning where inhabitants and stakeholders are asked to provide their opinion or views about how their city should develop. Increasingly, cities are finding that effective buy-in and ownership of urban development depends on innovative forms of engagement and effective partnerships. This includes, for example, participatory budgeting whereby inhabitants and stakeholders are given an irrevocable say in how a portion of the local budget is allocated. The rules of the game guarantee a high degree of transparency and accountability, which, today, can be augmented by block chain. Similarly, multi-stakeholder partnerships are required to realise high impact investments that provide a fair rate of return at the same time that local interests are catered to. A key ingredient of success for, for example, public-private partnerships, is public-public partnerships where broad-based consensus is reached between public and civil society partners prior to engagement with the private and commercial sectors.

A5 Selection of territories for development based on target models of standard (expert Fahria Masum)

A5.1 Objective of the report and approach to the work

The aim of the report is to present the evaluation of the book "Integral Guidelines for Urban Territories: A Set of Principles for the Integrated Development of Urban Areas" in general and its Part 5 in particular, and to formulate the recommendations and remarks for the improvements of the proposed guidelines.

While evaluating the guidelines and formulating the recommendations, the Expert took into consideration the following aspects:

• Emerging issues and planning context in Russia

• Global contexts (i.e. current development at OECD and UN level, present practices in EU and Germany)

• Own knowledge and experience

A5.2 Major observations and recommendations

Short term recommendations

• In Chapter 18 (page 140 and 142) the term 'Capital Construction Objects' has been used to define stabilisation approach and shrinkage. It is suggested to provide a working definition of the term in glossary.

• Chapter 18 (page 140) identifies three fundamental scenarios for the development of territories – growth, stabilisation and shrinkage. These three terms (growth, stabilisation and shrinkage) are also used as approaches to territorial development (page 143 and book 2, page 36). It is necessary to re-write the third paragraph of page 140 (book 1) and make clear the objectives of growth, stabilisation and shrinkage approaches as descried in book 2. Only reference to the book 2 is not sufficient here.

The term 'shrinkage' is not appropriate as an approach to territorial development (page 143), as the term is generally seen as a negative phenomenon. Therefore, considering the objectives of the approach (as described in book 2), instead of the term 'shrinkage', the term 'smart shrinkage' is suggested. The term 'smart shrinkage' was developed by Hollander and Nemeth (2011)[6] exploring what it means to lose population in a just and sustainable manner. Smart shrinkage is a set of policies that help areas with declining population manage the associated land use changes. Instead of fighting population loss smart shrinkage begins with the idea of maintaining a high quality of life for the remaining residents.[7] For example, Youngstown, Ohio, once considered the fastest-shrinking city in USA, adopted a plan for smart shrinkage.

• In Russian Federation there are many brownfields in the mining regions of Siberia and Arctic. The guidelines identifies (Chapter 16, page 132) two major Greenfield sites – undeveloped territories and territories in need of reorganisation. Though the territories in need of reorganisation includes sites of industrial enterprises planned for decommissioning, it is suggested to include brownfield as a third category of Greenfield sites.

Long term recommendations

• The guidelines do not itself contain a framework for mixed use development, but instead focuses on residential development, though the terms 'residential' and 'mixed use developed' are used simultaneously. Mixed-use development allows for the horizontal and vertical combination of land uses in a given area. It can take different forms: vertical mixed-used (combines different uses within the same building), horizontal mixed used (consists of single-use buildings within a mixed-use zoning district parcel) or mixed use walkable areas (combines both vertical and horizontal mix of uses in an area). The forms of mixed-use development could be specified and a specific target (allocation of land) for non-residential uses could be established.

• The Chapter 16 intents to analyse a set of criteria for determining the feasibility of developing residential and mixed-use projects. Four criteria are addressed – building density, transport activity, pedestrian activity and level of public transport service.

The criteria selected are more suitable for residential projects. A single set of criteria cannot be used for both residential and mixed use projects. For example, **compatibility between adjacent uses** should be ensured for mixed use project. Though which criteria are used and how they are evaluated differ considerably depending on the project, the following changes are suggested (considering Sustainable Development Goals) to ensure that the criteria adopted are efficient and improve the quality of life in existing and new urban settlements.

A5.3 Building density (suggested term building density and building design)

• Building design should focus on the social mix in order to promote cohesion and interaction between different social classes in the same community and to ensure accessibility to equitable urban opportunities by providing different types of housing. In this respect, well-convinced social housing policies can be effective tools to achieve the objective of social integration.

• Planning decision must conform the climate change adaptation and therefore, building design should encourage energy-efficiency housing layouts in order to enhance the thermal performance standards of new and refurbished buildings. Construction of sustainable and resilient buildings utilising local materials could be taken into consideration.

• The use of building design to minimise opportunities for crime and to increase public safety should be encouraged.

Anticipating future needs

Housing needs assessment should be a core part of research and analysis (Book 5, page 272) and identify the types of residential units and the range of tenures that the local population is likely to need over the plan period which:

• Meets household and population projections, taking account of migration and demographic change;

• Addressees the need for all types of housing, including social housing and the needs of different groups in the community including the people fall into the poverty zone;[5] and

• Assesses people's willingness to pay for housing, in terms of what they are willing to pay (affordability).

A5.4 General observation and recommendations

• To include a chapter on the 'Project Development and Implementation' in Book 1, summarising the information given in Book 5 and 6.

• 'Efficient use of land' should be included as a priority of standard.

• The list of principles of standard described in Chapter 1 (page 21) should include 'comfortable and affordable housing' instead of 'comfortable housing' only.

• In normal practice standards are considered as mandatory ways of doing things. As urban planning should follow a responsive and collaborative approach, it is recommended to use the term 'guidelines' instead of 'standards'.

• Mixed-use projects typically require several iterations until the best fit is found. It should have several alternatives measures to be developed and tested against each other. Standards and measures prescribed in Books 1-6 look very rigid and do not offer alternatives.

• For creating a profitable project, the development strategy must synchronise the phasing and timing of each component of the project. The guidelines do not offer any time framework (max. or min. project duration).

Book 5, page 30 specifies the following steps for implementing a territory development project:

• The choice of territory for development;

• Obtaining rights to land within the boundaries of the selected development area;

• Development and coordination of documentation on the territory planning;

• Development and coordination of documentation for architectural and construction design;

• Construction and commissioning of facilities.

The process of acquiring land and gaining the entitlements necessary for a project can cause numerous challenges. Land ownership pattern and possibility/complexity of acquiring land should be taken into consideration while making the choice of territory for development.

• Book 5, part 5 identifies 5 principles of participation in decision making process.

• Principles 2: Equal terms of participation (page 128) and Tab. 16: Main stakeholders of the territory development project (page 133) should emphasise the involvement of women and youth as well.

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1 E.g., average FAR in London is above 4.0 and in New York above 7.0 with 15.7 in Battery Park and 18.0 in the Financial District (Wall Street).

2 A good example is Copenhagen: www.guangzhouaward.org/award_d.aspx?CateId=111&newsid=36

3 A good example is Milan's food policy. http://www.guangzhouaward.org/award_d.aspx?-CateId=285&newsid=1433

4 See: Tampere, Finland: http://ethica.fi/en/hiedanranta-makes-tampere-a-forerunner/ and Singapore: https://www.pub.gov.sg/watersupply/singaporewaterstory

5 According to the November 21 report by the Russian Presidential Academy of the National Economy and Public Administration, 22 percent of Russians fall into the poverty zone. https://www.rferl.org/a/study-22-percent-of-russians-live-in-poverty-36-percent-in-risk-zone-/29613059.html

6 Hollander, J.B. & Nemeth, J. (2011): The bounds of smart decline: a foundational theory for planning shrinking cities, In Housing Policy Debate 21 (3): 349-367.

7 Hollander, Polsky, Zinder and Runfola (2019): Shrinking suburb in a time of crisis. The Routledge Companion to the Suburbs. Routledge: New York.

ISOCARP EXPERTS

B

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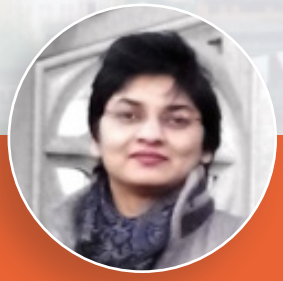

Dr.-Ing. Fahria Masum is an Expert in Land Management and Land Policy. She gains more than 10 years of international experience in education and capacity development with key Expertise in education strategy and policy development in the land sector. She took part in various consulting projects funded by the World Bank, GIZ, UN Habitat (GLTN) and Hanns Seidel Foundation. She served Chair of Land Management at the Technische Universität München (TUM), Germany as a scientific staff during 2007-2016. She was coordinator of the Master's Programme and Doctoral Studies Land Management and Land Tenure at TUM. During 2010-2017 she was a guest lecturer in land conflict management at ITC, University of Twente, Netherlands. Presently she holds a position of a visiting professor at the Agricultural University of Krakow in Poland. She studied Urban and Rural Planning at Khulna University, Bangladesh, and Land Management and Land Tenure at Technische Universität München. She holds a PhD in urban land management with key competency in peri-urban land development. She also completed a post-doctoral research on employability and education system in Europe.

Derek Martin is an international geographer and strategic planner (Universities of Exeter & Amsterdam) specialised in the cross-border, European and international dimension of strategic planning, both as a Dutch national civil servant and a seconded national Expert at the European Commission. For the last 10 years, as Secretary General of the International Federation for Housing and Planning (IFHP) and as a consultant, he has been active in various European projects and UN Habitat work.

Eric Huybrechts is a senior Architect and Urban/Regional Planner, member of ISOCARP, Icomos, SFU, and is Officer of the Royal order of Sahametrey (Kingdom of Cambodia). He is the Manager of International affairs of Paris Regional planning Agency (www.iau-idf.fr). He has developed a large experience at local, sub metropolitan, metropolitan, regional and national scales in the field of Urban and Regional Planning as Expert and team leader in more than 20 countries. He has also an academic experience as a scientific researcher in the Middle-East countries and as a lecturer in several universities in France (Sorbonne university, Diderot university, ENPC) and abroad (MIT/Boston).

Nicholas You is a veteran urban specialist and thought leader. Prior to his retirement from the UN he was the senior policy and planning advisor to UN-Habitat and the manager of the Habitat II Conference held in Istanbul in 1996. He is the founder and honorary chairman of the UN-Habitat World Urban Campaign Steering Committee, former chairman of the Assurance Group for Urban Infrastructure of the World Business Council for Sustainable Development, former Chairman of the Urban Strategy and Innovation Council for ENGIE and former co-President of the Global Cities Business Alliance. He is currently the Executive Director of the Guangzhou Institute for Urban Innovation, co-Chair of the Open Green City Lab in Shenzhen and adjunct for the Centre for Liveable Cities, Singapore.

He regularly advises central and local governments, technology companies and civil society organisations on urban sustainability, urban governance and urban innovation including the nexus between water, waste, transport and energy. He also works as a strategic planning and governance advisor to many metropolitan authorities worldwide.

Moderator

Didier Vancutsem is an international Expert with large experience in Urban and Regional Planning, Landscape Planning, Infrastructure, Environmental Management and Integrated Strategies. He holds engineer and master degrees in City and Regional Planning, Landscape Architecture and Regional management. Based in Munich / Germany, he operates as Office Director at urban scape | Urban Strategies and conducts also research activities in European and international projects. He is Associate Professor / Lecturer at the Université Libre de Bruxelles / Faculty of Architecture and University of Applied Sciences Munich-Weihenstephan.

Since October 2013 he is Secretary General of the International Society of City and Regional Planners. As Chairman of Habitat Professionals Forum at UN-Habitat, he is involved in several activities on global level, related to World Urban Campaign and others. He is also member of different professional societies, honorary appointments in Europe and worldwide and IFLA Europe Delegate.

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REVIEW

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