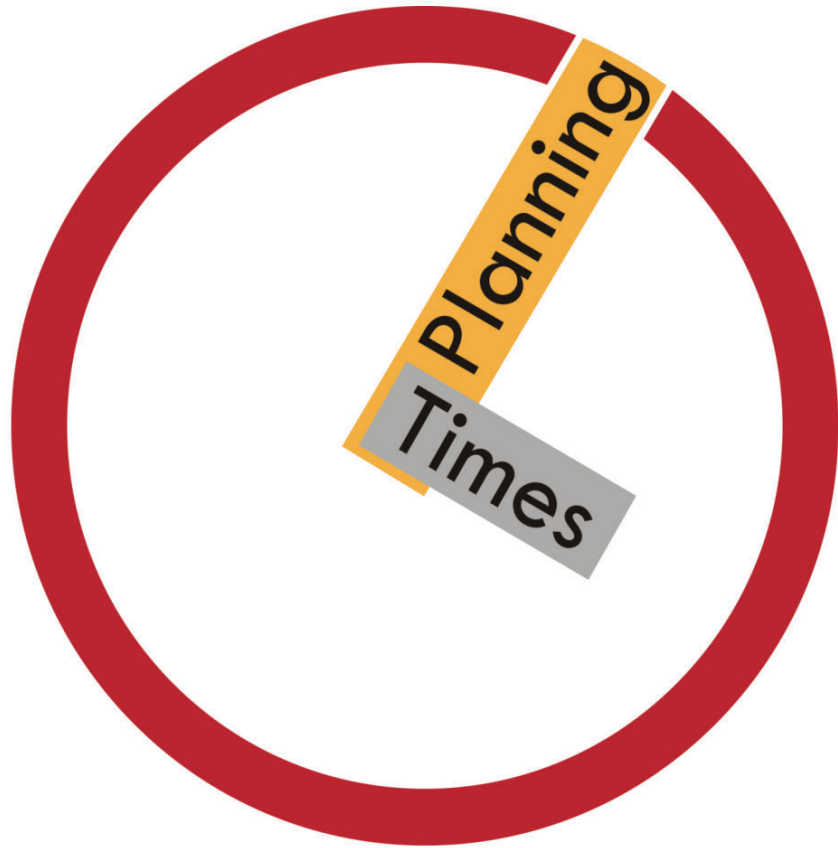


Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE, Pietro ELISEI (Eds.)

PLANNING TIMES

YOU BETTER KEEP PLANNING OR YOU GET IN DEEP WATER,
FOR THE CITIES THEY ARE A-CHANGIN'...



www.corp.at

REAL CORP 2013

18th International Conference on Urban Planning, Regional Development and Information Society

PROCEEDINGS TAGUNGSBAND



20-23 MAY 2013
ROME, ITALY

PLANNING TIMES

REAL CORP 2013

*For if there are times past and future, I desire to know where they are.
(Augustine, Confessions XI.18)*



ORDINE DEGLI
ARCHITETTI
PIANIFICATORI
PAESAGGISTI E CONSERVATORI
DI ROMA E PROVINCIA



CEIT
CENTRAL EUROPEAN
INSTITUTE OF TECHNOLOGY

CEIT ALANOVA
Institute of Urbanism,
Transport, Environment
and Information Society



ROMA CAPITALE
Assessorato alle Politiche Culturali e Centro Storico



ISOCARP
Knowledge for better Cities

CORP

Kompetenzzentrum für
Stadtplanung und Regionalentwicklung



Competence Center of
Urban and Regional Planning | www.corp.at

ISBN:
CD-ROM: 978-3-9503110-4-4
PRINT: 978-3-9503110-5-1

REAL CORP 2013. Planning Times
You better keep planning or you get in deep water,
for the cities they are a-changin'...

Proceedings of

18th International Conference on Urban Planning, Regional Development and Information Society

Beiträge zur

18. internationalen Konferenz zu Stadtplanung, Regionalentwicklung und Informationsgesellschaft

Edited by

Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE, Pietro ELISEI

Schwechat, 2013

CD-ROM-Edition ISBN: 978-3-9503110-4-4

Print-Edition ISBN: 978-3-9503110-5-1

Im Selbstverlag des Vereins

CORP – Competence Center of Urban and Regional Planning

Kompetenzzentrum für Stadtplanung und Regionalentwicklung

Lerchergasse 4, A-2320 Schwechat-Rannersdorf

office@corp.at, <http://www.corp.at>

REAL CORP 2013

TEAM

Manfred SCHRENK

Clemens BEYER

Christian EIZINGER

Burcu AKINCI

Linda DÖRRZAPF

Patrick KREJCI

Adela MARCOCI

Michael MÜLLNER

Julia NEUSCHMID

Daniela PATTI

Flora STROHMEIER

Wolfgang W. WASSERBURGER

All rights reserved. – Alle Rechte vorbehalten.

Editors – Herausgeber:

DI Manfred SCHRENK, CEIT ALANOVA – Central European Institute of Technology, Schwechat, Austria

Prof. Dr. Vasily V. POPOVICH, SPIIRAS, St. Petersburg, Russia

Dr.-Ing. Peter ZEILE, TU Kaiserslautern, Kaiserslautern, Germany

Dr.-Ing. Pietro ELISEI, URBASOFIA, Bucharest, Romania

Publisher – Medieninhaber und Verleger:

CORP – Competence Center of Urban and Regional Planning

Kompetenzzentrum für Stadtplanung und Regionalentwicklung

Lechergasse 4, A-2320 Schwechat-Rannersdorf

office@corp.at, <http://www.corp.at>

CD-ROM Edition: ISBN 978-3-9503110-4-4

Print Edition: ISBN 978-3-9503110-5-1

Contributions by the authors reflect their own findings, views and opinions which may not necessarily be consistent with the views and opinions of the editors.

Die Arbeiten geben die Erkenntnisse und Ansichten des jeweiligen Autors wieder und müssen nicht mit den Ansichten der Herausgeber übereinstimmen.

Table of Contents – Inhaltsverzeichnis:

PREFACE	5
Manfred Schrenk.....	5
A new Approach in the Visualization of Georeferenced Sensor Data in Spatial Planning	17
Frank Michel, Daniel Steffen, Benjamin S. Bergner, Jan-Philipp Exner, Peter Zeile	17
A Study on Thermal Comfortable following the Thermal Environment Migration in Detached Housing Area in Korea	25
Jiwon Ryu, Eung-Ho Jung, Dae-Wuk Kim, Akira Hoyano.....	25
Alpine Stadt-Landschaften. Beobachtungen zur Rolle von Freiräumen im Tiroler Inntal aus Sicht des Landscape Urbanism	37
Wolfgang Andexlinger.....	37
Alte Terre – Aree agricole di versante, nuovi modelli di sviluppo	47
Stefania Staniscia	47
An Environmental Resilience based on Approaching Planners Triangle for Integrated Catchment Management	57
Chin-Hsien Liao, Hsueh-Sheng Chang	57
An Experimental Study of Article-Finding Behaviors in a Shopping-Around Situation	67
Yoshinori Natsume, Sho Nakamura, Toshiyuki Kaneda	67
Application of Modeling Urban Growth with Cellular Automata in Spatial Planning	77
Marjan Javadian Namini, Hanieh Shamskooski, Mostafa Momeni	77
Approach to Spatial Data Infrastructure Development for Spatial Planning in Serbia	85
Ljiljana Živković.....	85
Assessing Impacts of Passive Defense Policies Interventions on Spatial Logic of Tehran Metropolitan Area (TMA)	95
Sahar Nedae Tousi, Ehsan Ghorbani Ghashghae Nejad	95
Augmented Reality Apps for Real Estate	109
Veronika Lang, Peter Sittler.....	109
Augmented Reality as a Communication Tool in Urban Design Processes	119
Daniel Broschart, Peter Zeile, Bernd Streich.....	119
BROWNTRANS – Focusing Brownfield Knowhow Transfer	127
Jiřina Bergatt Jackson, Zita Prostějovská, Barbara Vojvodíková, Karel Bařinka	127
Cadastral Feedback on Spatial Planning	133
Gerhard Navratil, Paolo Fogliaroni	133
Cellular Automata Approach for Medium Sized Cities	141
Caroline Bayr, Rose-Gerd Koboltschnig, Miriam Steurer.....	141
CG Mixed Reality Architectural Workspace	149
Andreas Behmel, Josef Gründler, Wolfgang Höhl, Thomas Kienzl, Heimo Sandtner	149
City Building and Urban Failure: Why Urban Development in Serbia Does Not Achieve Planned Results	159
Milena Vukmirovic, Mira Milakovic, Nikola Samardzic	159
City Works: A New Model for Management of Public Land	167
Lapo Cozzutto	167
Climate Data Analysis on IGIS	171
Filipp Galyano, Vasily Popovich, Manfred Schrenk, Natalia Zhukova.....	171
Collaboration in the Brownfield Regeneration Process – Legally Binding or Informal Approach?	181
Ana Perić, Danilo Furundžić	181
Conceptual Assessments on Epistemological Differences in Tactical and Strategic Spatial Planning	189
Aynaz Lotfata.....	189
Creating Collective Memories in Urban Spaces of Iran	195
Nasim Iranmanesh, Elham Amini	195
Creativity and Innovation in a Mid-Urban Size Learning Infrastructure – Designing Spaces for Thriving Innovation Communities	205
Markus F. Peschl, Thomas Fundneider	205
Crime Mapping for Urban Planning – a Useful Tool for New Planning Times?	213
Willi Wendt, Jan-Philipp Exner	213
Cross-Border Transport Modelling in the Region of Aache	223
Conny Louen, Julia Kammer.....	223
Data Analysis Methods for Urban Planning – Problem-Oriented Stakeholders Maps Building	233
Victor L. Kuriashkin, Natalia A. Zhukova	233

Decision Support Systems and Tools as Collaborative Web Platform for Sustainable Development of Landscapes	239
Thomas M. Klein, Ulrike Wissen Hayek, Enrico Celio, Adrienne Grêt-Regamey	239
Density Exercises in Projects of Oriol Bohigas. Density as a Tool for Suburbs Regeneration	249
Cecilia De Marinis	249
Deprived Neighbourhoods in Neo-Liberal Times – the Role of Public Funding in Education	257
Cecilia Scoppetta, Caterina Scoppetta	257
Drive Towards Circular Land Use Management	267
Uwe Ferber, Jirina Bergatt Jackson, Thomas Preuss, Maic Verbücheln, Anna Starzewska-Sikorska	267
Einkaufsstättenwahl, Einzelhandelscluster und räumliche Versorgungsdisparitäten – Modellierung von Marktgebieten im Einzelhandel unter Berücksichtigung von Agglomerationseffekten	275
Thomas Wieland	275
Endangerments on Schools	285
Sascha Henninger	285
Environmental Management in the Coastal Urban Area of Alimos	293
Agisilaos Economou, Roido Mitoula	293
Environmental Monitoring and Planning: Joining Forces for Facing Changes	303
Eliot Laniado, Mara Cossu, Silvia Vaghi	303
Evaluation of City Development Strategy as a New Planning Framework with Emphasis on Good Governance in Qazvin City	313
Mostafa Momeni, Marjan Javadian Namini, Hanieh Shamskooski	313
Flooding, Vulnerability and Livelihoods of Low Income Coastal Settlements in Lagos	321
Oluwafemi Olajide, Suzanne Speak, Taibat Lawanson	321
French Planning System Paradox	331
Jean-François Guet, Sylvain Petitot	331
From Plan to Augmented Reality – Workflow for Successful Implementation of AR Solutions in Planning and Participation Processes	339
Florian Reinwald, Christian Schober, Doris Damyanovic	339
Geographic Information System for Land Acquisition Process: A Social Need for Road Infrastructure Development in India	349
Bikram Kumar Dutta	349
Geomedia Skills – a Required Prerequisite for Public Participation in Urban Planning?	357
Sabine Hennig, Robert Vogler	357
Gestione delle risorse ambientali e pianificazione del territorio: le linee guida per la Valutazione ambientale strategica come strumento sistemico nei processi di pianificazione e programmazione	367
Federica Isola, Cheti Pira	367
Graffiti in Graz. Spatiotemporale Ansätze zur Analyse eines sozio-kulturellen Phänomens	377
Josef Gspurning	377
Historical Buildings Integration Into a Modern Industrial Urban Environment of Perm	387
Anastasia Kuznetsova, Yuliya Bushmakova	387
Hot Town, Summer in the City – Entwicklung von hitzerelevanten Anpassungsstrategien im Städtetourismus	393
Brigitte Allex, Christiane Brandenburg, Ursula Liebl, Thomas Gerersdorfer, Christina Czachs	393
Housing Quality and Lost (Public) Space in Croatia	399
Andelina Svirčić Gotovac, Jelena Zlatar	399
Human Sensory Assessment Methods in Urban Planning – a Case Study in Alexandria	407
Benjamin S. Bergner, Jan-Philipp Exner, Martin Memmel, Rania Raslan, Dina Taha, Manar Talal, Peter Zeile	407
Incremental Planning – Cooperative Scenario and/or Masterplan? Long- and Short-Term Planning Horizon of Urban Design Projects within the Existing Urban Fabric. Analysis of Projects in Vienna and Switzerland with Regard to the Factors Triggering Varying Planning Times	419
Silja Tillner	419
Information Around Us: Questions Connected to Information and Data Heterogeneities in Planning Activities	429
Otakar Cerba	429
Infrastructures of Smart Platforms – Mobile Tools to Control Intelligent Networks in Dynamic Urban Space	435
Benjamin Allbach, Julia Germann, Andreas Allbach	435
Interactive Simulation of Urban Environments over Time with Respect to Human Values	445
Hanieh Shamskooski, Mostafa Momeni, Marjan Javadian Namini	445
Interweaving the Digital and Analog Lives of Cities: Urban Sensing and User-Generated Cities	453
Salvatore Iaconesi, Oriana Persico	453

Keeping the Public Sphere Anchored to Social Changes	465
Cecilia Scoppetta.....	465
Klimaverträglich mobil in Zeiten des demographischen Wandels – Wie wohnen Mobilität bestimmt	475
Mechtild Stiewe, Doris Bäumer	475
Kollektive Strategien für zukunftsfähige Stadtentwicklung – Erfahrungen aus einem partizipativen Szenarienprozess in Niederösterreich	485
Elisabeth Schuppenlehner-Kloyber, Marianne Penker, Michael Braito.....	485
Landscape as a Connection – Beyond Boundaries	497
Tamara Marić, Josip Zaninović, Bojana Bojanić Obad Šćitaroci	497
Le Politiche Temporalì Urbane tra Pianificazione e Inclusività Sociale: il Caso dei Piani Territoriali dei Tempi e degli Spazi della Regione Puglia in Italia	507
Tiziana Cardinale, Laura Pavia	507
London After the Spectacle Year, Who Claims Which Space and Who Gets it?	517
Judith Ryser.....	517
Longing for the Ordinary – the Meaning of Authentic Places in the North-American Metropolis	527
Jorick Beijer	527
L'altra faccia dell'economia: gli street vendors e l'uso dello spazio urbano nell'area metropolitana di Cagliari	535
Roberta Floris, Anania Mereu	535
Metrics of Assessing Affordable Living	545
Justyna Karakiewicz.....	545
Mobile Embedded Climate Sensing 2.0	551
Benjamin Allbach, Sascha Henninger	551
Modernity and Collage of City Non-Core Area: the Case of Suzhou River Area in Shanghai	561
Lingyan Yao, Ming Tong, Shuiqing Wu, Xin Chen.....	561
Morgenstadt: CityInsights. A Research Approach for Systems Research in Urban Development	571
Dominik Kalisch, Susanne Schatzinger, Steffen Braun, Alanus v. Radecki.....	571
Neighbourhoods' Future Created by Combined Stakeholder Engagement	579
Katharina Söpper.....	579
Neoliberal Challenges and Practices of Urban Regeneration Projects in Istanbul	587
A. Erdem Erbas, Tansel Erbil.....	587
Neue Instrumente der Partizipation: Vergleich von mobiler Augmented Reality und Perspektivskizzen im Rahmen des Shared-Space-Projektes Alleegasse in Hartberg	597
Martin Berger, Mario Platzer, Christoph Schwarz, Thomas Pilz	597
New Geographies of Self-Organisation	607
Cecilia Scoppetta.....	607
New Methods of Climate Monitoring	617
Benjamin Allbach, Sascha Henninger	617
New Public Open Spaces and Old Prejudices: Public Space Uses in the Centre of Medellín	627
Eva Schwab.....	627
New Quality of Public Spaces as a Stimulant for Socio-Economic Development – the Specificity of Medium-Sized Towns ...	639
Anna Goleǳinowska	639
Nuove strategie sociali, economiche, urbane e architettoniche per il social housing	649
Flavio Mangione	649
Objektorientierte Landbedeckungsklassifikation von Graz (Österreich) unter besonderer Berücksichtigung der dritten Dimension	651
Wolfgang Sulzer, Marc Muick, Winfried Ganster	651
Open Space for Social Housing – between Social Benefit and Marketing Asset?	661
Lilli Lička, Philipp Rode, Doris Bistricky.....	661
Opportunities for the Development of the Latvian Property Tax Administration System through Improvements in the Property Registration System and the Implementation of European Union Requirements for Geospatial Information	671
Sarmite Barvika, Aldis Rausis, Inga Berzina	671
Optimizing Public Participation through ICT and Social Networks: Questions and Challenges	683
Chiara Garau	683
Planning in Fragile Sites in Turkey: in Case of Hasankeyf	691
Hale Mamunlu Kocabas	691
Planning Times of the City: an Overview on Urban Time Policies	701
Marco Mareggi.....	701

Polish Suburban Landscape Made of Entrepreneurial Tissue	711
Justyna Martyniuk-Peczek, Olga Martyniuk.....	711
Polycentric Structures and Mobility in Agglomerations – an Analysis of the Vorarlberg Rhine Valley in Austria	721
Oliver Roider, Roman Klementschtz.....	721
Pop-up Pest: An Educational Game for Active Participation of Children and Youth in Urban Planning	731
Eszter Tóth, Alenka Poplin.....	731
Public Space Issues in Bali Tourist Beaches	743
Anom Rajendra, Richard Nicholls.....	743
Quantifying Town Development in Space and Time using Land Use Data	751
Miriam Steurer, Caroline Bayr.....	751
Regional Land-Taking Processes in Italy: a Study Concerning Sardinia	757
Sabrina Lai, Corrado Zoppi.....	757
Regional Planning and Territorial Competitiveness: the Role of Identitary Heritage. The Case of the Sardinian Region	767
Anna Maria Colavitti, Sergio Serra, Alessia Usai.....	767
Research on China’s Urban Network Based on the Relations between Micro-Blog Users: a Case Study of Sina Micro-Blog	779
Feng Zhen, Bo Wang, Guangliang Xi, Yinxue Chen.....	779
Smart Community Participation for Revitalization of Urban Green Spaces Over Time: Case Study New Delhi	793
Sandeep Kumar Raut, Papiya Bandyopadhyay Raut.....	793
Social Housing in Serbia: Dual Approach	801
Uros Vesic, Tatjana Kotic, Aleksandra Krstic-Furundzic.....	801
Solid Waste Management, an Environmental Challenge in Millennium Cyber City in India, Gurgaon	811
Sanhita Bandyopadhyay.....	811
Spatial and Temporal Dynamics of Residential Areas Affected by the Industrial Function in a Post-Communist City – Case Study Bucharest.....	821
Diana Andreea Onose, Ioan Cristian Iojă, Gabriel Ovidiu Vânău, Mihai Răzvan Niță, Cristiana Maria Ciocănea, Delia Adriana Mirea.....	821
Spatial Resilience of Megacities based on Conceptual Model from Concept to Implementation. Case Study: Greater Cairo, Egypt	831
Ahmed Abdelhalim M Hassan.....	831
Strengthening Alexandria Urban Fabric by Planning Urbanism's Walkable Area.....	841
Shahira Sharaf El Din, Ghada Ragheb.....	841
Study on “Micro-Participation” of the City – Emergency Management in the Age of Micro-Blogging	851
Xi Guangliang, Zhen Feng.....	851
Supporting Spatial Planning with Qualitative Configuration Analysis	863
Paolo Fogliaroni, Gerhard Navratil.....	863
Synergies and Goal Conflicts for Climate Change Policy and Spatial Planning	871
Douglas Baker, Gregory Marston, Lachlan McClure.....	871
Temporality of Physical and Political Liminal Spaces in the Urban Transformations of the Greater Paris	879
Federica Gatta.....	879
The Beauty or the Beast? Can Illegal Housing Tackle the Problem of Social Integration and Social Housing?	889
Branislav Antonic, Biserka Mitrovic.....	889
The Challenge of Economic Regeneration in Small Urban Settlements of Greece	901
Despina Dimelli.....	901
The Elderly under Urban Heat Pressure – Strategies and Behaviours of Elderly Residents against Urban Heat.....	909
Brigitte Allex, Arne Arnberger, Anna Wanka, Renate Eder, Hans-Peter Hutter, Michael Kundi, Peter Wallner, Franz Kolland, Beate Blättner, Henny Annette Grewe.....	909
The Heart of the City from a Socio Cultural Perspective.....	917
Heba Safey Eldeen.....	917
The Identity of Place ... and Memory of Time ... Define Space-Time of Human Architecture.....	927
Mohammed Qasim Abdul Ghafoor Al Ani.....	927
The Multidimensionality of Contemporary Urban Spaces – Implications for Design	945
Cecilia Scopetta.....	945
The Planning of Peri-Urban Agricultural Areas: the Case of “L’Horta de València”	953
José Luis Miralles i Garcia.....	953
The Rural-Urban Fringe in the Netherlands: a Morphological Analysis of Recent Urban Developments	963
Kersten Nabelek, Pia Kronberger-Nabelek, David Hamers.....	963

The Slums Affect the Future of the Metropolis	977
Sonia Pintus.....	977
The Taming of the Shrew: Coping with Illegal Settlements in Belgrade, Serbia	985
Biserka Mitrovic, Branislav Antonic.....	985
Timeless Modernity, Shifting Ideologies: a Vibrant Street in a Distorted Reality?	995
Mira Milakovic, Aleksandra Stupar	995
Touristic Potentials of Open Space Heritage – 4 Case Studies in South East Europe	1001
Pixie Jacobs, Lilli Lička, Manfred Schwaba	1001
Transnational Planning Support by the European Geodata Infrastructure INSPIRE	1009
Joachim Benner, Karl-Heinz Häfele, Andreas Geiger.....	1009
Urban Coastal Environment and Management Policies in Attica	1019
Minas Angelidis, Agisilaos Economou	1019
Urban Health in India: a Challenge to Policy Making	1027
Indrani Gupta, Swadhin Mondal	1027
Urban Heat Islands – Strategy Plan Vienna	1037
Christina Czachs, Florian Reinwald, Doris Damyanovic, Christiane Brandenburg, Birgit Gantner, Brigitte Alex, Jürgen Preiss, Ursula Liebl.....	1037
Urban Infill as Strategy for Social Housing Stock	1045
Mariella Annese, Barbara Del Brocco.....	1045
Urban Planning Implications of Changing Land Use Structure of Metropolitan Lagos, Nigeria	1055
Leko Oduwaye	1055
Valuation Cycles Of Pre Industrial Townscape	1067
Jürgen Lafrenz.....	1067
Abandoned Churches in European Countries: a UK Perspective	1075
Peter Aiers.....	1075
Abandoned and Re-Used Churches in Germany	1079
Kerstin Gothe, Stefan Netsch	1079
About Historical Centers: Is the Trend towards Decor Really Irresistible?	1083
Olivier Lefebvre.....	1083
Are the Netherlands Shrinking or Just Changing?	1089
Stefan Netsch, Niels Kropman	1089
ARGUS: a Personalised Guidance System to Improve Autonomy of People with Visual Impairment in the City	1099
Oihana Otaegui, Estibaliz Loyo, Eduardo Carrasco, Claudia Fösleitner, John Spiller, Daniela Patti, Adela Marcoci, Rafael Olmedo, Markus Dubielzig.....	1099
Attract-SEE – Assessing Territorial Attractiveness in South East Europe. Establishing a Common Territorial Monitoring Framework	1105
Julia Neuschmid, Christian Eizinger, Blaž Barborič, Graziella Guaragno, Tomaž Miklavčič, Stefano Marani, Ljiljana Živković, Francesca Altomare, Đorđe Milić, Gianandrea Esposito, Alessandro Selva	1105
CentropESTATISTICS – Interactive Creation of Maps and Charts	1113
Clemens Beyer, Walter Pozarek, Manfred Schrenk	1113
Cities for All: All-Inclusive Collective Urban Spaces for the Public – a Case of a Successful Interactive Model	1117
Eric R. P. Farr, Poorang (Amir E.) Piroozfar	1117
Competitiveness Factors of Higher Education Institutions, with Particular Respect to Hungarian Cities	1125
László Tamándl, Dávid Nagy.....	1125
Construction of Spatial Memory Demolished Historic Architectural Context after 1972 Earthquake in Managua, Nicaragua	1131
Romer Altamirano Guerrero, Martín Alfredo Majewsky García.....	1131
CURe MODERN – Monitoring of Infrastructures in Cross-Border Regions	1135
Jan-Philipp Exner, Timo Wundsam, Christopher Jung, Martin Fabisch	1135
Data Representation Dynamic Model for Distributed Urban IGIS	1139
Andrey Pankin, Natalia Zhukova	1139
Development of the Border Territories within the Framework of National Development Plan for the Republic of Kazakhstan	1147
Turlybek Mussabayev, Karlygash Muldagaliyeva	1147
Disaster Prevention Planning and Disaster Preparedness for Earthquake	1153
Shabnam Farboud, Anahita Mahmoudi.....	1153

Economy out of the Big Lights: the Issue of Mono-Cities in the Republic of Kazakhstan within the Framework of National Development Plan for the Republic of Kazakhstan	1159
Turlybek Mussabayev, Karlygash Muldagaliyeva	1159
Effective Usage of Short-Term Parking Zones by Offering Real-Time Information on the Utilisation of Parking Lots.....	1163
Tina Uhlmann, Reinhard Hössinger, Peter Widhalm.....	1163
Energia e paesaggio al tempo dei cambiamenti climatici.	1169
Marcello Magoni	1169
Energy Poverty: Considerations for Socially Sustainable Shifts Towards Renewable Energy Sources.....	1177
Tania Berger, Anna Faustmann, Andrea Hoeltl.....	1177
FIFA World Cup 2018 – the Planning Challenge for Russian Cities	1185
Alexander Antonov, Tatiana Badmaeva	1185
Globalization and Urban Land Use Planning: The Case of Lagos, Nigeria.....	1193
Leke Oduwaye.....	1193
Governance in the Metropolitan Region: The Vienna-Bratislava Case	1201
Daniela Patti	1201
Handlungsoptionen für Transformationsprozesse österreichischer Städte Richtung Smart City: Den demographischen Wandel beachten!	1207
Martin Berger, Martina Jauschneg, Sebastian Beiglböck, Tobias Panwinkler, Katharina Gugerell, Carina Diesenreiter.....	1207
Heute die Jugend, morgen die ganze Welt – nachhaltige Fortbewegung langfristig fördern.....	1213
Elisabeth Füssl, Manuel Oberlader, Odilo Seisser, Alexander Risser, Ralf Risser	1213
High-Resolution Global Monitoring of Urban Settlements.....	1219
Mattia Marconcini, Thomas Esch, Andreas Felbier, Wieke Heldens	1219
HLANDATA – Harmonisation of Land Use and Land Cover Data Across Europe: Project Results	1225
Julia Neuschmid, Manfred Schrenk, Wolfgang W. Wasserburger.....	1225
Hydro Urban Units – a Meso Scale Approach for Integrated Planning.....	1229
Bernd Eisenberg, Eva Nemcova, Rossana Poblet, Antje Stokman	1229
I-SCOPE: Smart Cities and Citizens	1239
Daniela Patti, Raffaele de Amicis, Federico Prandi, Ellie D’Hont, Heino Rudolf, Pietro Elisei, Irina Saghin	1239
Indicator-Based Assessment of Land Use Planning in Wrocław Region with CommunityViz	1247
Jan Kazak, Szymon Szewrański, Paweł Decewicz	1247
JPI Urban Europe – Urban Megatrends Study.....	1253
Johannes Riegler, Klaus Kubeczko, Wolfgang Loibl	1253
LIMES – From Beacons to Facebook	1257
Rainer Zementz.....	1257
LIMES – Older than the Way of St. James	1261
Franz Schafranski	1261
LIMES – Turning on the Light Switch	1267
Daniel Hamann, Katrin Wunderlich	1267
Linking Demographic and Spatial Data for a Successful Stakeholder Process in Climate Change Protection Projects – The Case Study of Leoben/AT	1273
Martina Jauschneg, Britta Fuchs, Mandy Schönemann	1273
Living Environment Information Services – Enhancing the Collaboration between Authorities and the Citizens	1279
Kaarina Vartiainen, Niina Nieminen, Tiia Tanskanen	1279
Meeting the Needs of Different User Groups in Mobility as Key to Ensure Social Inclusion.....	1285
Tina Uhlmann, Wiebke Unbehaun	1285
Meter-ON: Smart Metering for Europe's Smart(er) Households.....	1291
Giuseppe Mauri, Sara Raffaelli, Adela Marcoci, Wolfgang W. Wasserburger.....	1291
Motorways in Agglomerations – Changing Concepts for Changing Needs	1295
Thomas Steiner	1295
Opportunities for Sustainable Development of Suburban Rural Areas on Example of Karabiha Rural Settlement	1301
Anastasia Dubova	1301
Orijentir – Interactive City Guide for All.....	1305
Ljubica Gajević, Vidan Danković, Miloš Milovanović	1305
Prato: Organizzazione e Tecnologie per un nuovo Modello di Sviluppo urbano consapevole	1309
Davide Puccianti.....	1309
Regional Effects of Urban Planning – an Informal GIS Tool to Support Sustainable Strategic Planning	1313
Anja Brauckmann, Alexander Mayr	1313

Rete Ecologica Locale, aree verdi al limite tra città e campagna	1319
Giacomo Cozzolino, Alessandro Piazzì	1319
Reuse of Abandoned Churches in the Netherlands	1321
Albert Reinstra	1321
Risk Management and Spatial Planning – Understanding Rapid Urbanization in Climate Change.....	1327
Harry Storch, Nigel Downes	1327
Smart Cities and Urban Governance. The urbanAPI Project: Bologna Case Study.....	1335
David C. Ludlow, Maria Paola Mauri, Chiara Caranti	1335
Stadtentwicklungsfonds – ein innovatives europäisches Finanzierungsinstrument zur Entwicklung integrierter Immobilien.....	1341
Michael Nadler.....	1341
Stadtklimakomfortzonen – von übergeordneten Planungen zu lokalen Interventionen	1345
Bernd Eisenberg.....	1345
SUNSHINE – Smart Urban Services for Higher eEnergy Efficiency	1349
Linda Dörrzapf, Barbara Mušič, Manfred Schrenk, Wolfgang W. Wasserburger	1349
The 7+1 Graz Process – a Method for Promoting the Development of a Smart City	1353
Kersten Hofbauer, Ernst Rainer, Hans Schnitzer	1353
The Role of Community in Urban Regeneration: Mixed Use Areas Approach in USA.....	1361
Carmelina Bevilacqua, Jusy Calabrò, Carla Maione	1361
Underground Space – Lost Space Ready to be Reclaimed.....	1367
Han Admiraal, Antonia Cornaro	1367
Urban Agriculture: How to Create a Natural Connection between the Urban and Rural Environment in Almere Oosterwold (NL).....	1373
Jan Eelco Jansma, Esther J. Veen, Arjan G.J. Dekking, Andries J. Visser.....	1373
Urban Dimension of Territorial Cohesion: Perspective Facing the Crisis	1383
Maria Prezioso, Angela D’Orazio	1383
Urban Nexus – Structured Dialogue, Problem-Solving, and Strategic Partnerships	1391
David Ludlow, June Graham, Nuria Blanes	1391
Urban Risk Assessment using Intelligent Geoinformation System	1397
Oksana Smirnova	1397
Urban Space Patterns and Homelessness in Bucharest, Romania	1405
Mirela Paraschiv.....	1405
VIATOR – A Mobile Travel Companion for Disabled Persons	1411
Wolfgang Narzt, Wolfgang W. Wasserburger.....	1411
Was kosten Radverkehr, Fußverkehr, öffentlicher Personennahverkehr und Kfz-Verkehr eine Kommune? – Entwicklung und Anwendung einer Methode für den Vergleich verschiedener Verkehrsmittel anhand von kommunalen Haushalten ...	1417
Volker Schmitt, Björn Bauer, Carsten Sommer	1417
Discomfort of the Present, Relief of the Future	1427
Michel Sudarskis, Viviana Rubbo, Lola Davidson.....	1427
Sustainable Mobility in Urban and Touristic Areas.....	1433
Gianluca Fabbri, Fabio Massimo Frattale Mascioli, Maurizio Paschero, Marco Dessì	1433

The Beauty or the Beast? Can Illegal Housing Tackle the Problem of Social Integration and Social Housing?

Branislav Antonic, Biserka Mitrovic

(Assistant scientific researcher Branislav Antonic, MArch, Faculty of Architecture, University of Belgrade, Bulevar kralja Aleksandra 73/II, Belgrade, antonic83@gmail.com)

(Assistant Professor Biserka Mitrović, MSc, MArch, Faculty of Architecture, University of Belgrade, Bulevar kralja Aleksandra 73/II, Belgrade, biserkamitrovic@gmail.com)

1 ABSTRACT

Serbia as a neighbouring EU country is, like some other countries, facing the problems of incoherent urban and regional development, of tackling the urban growth and of deficit of integrated urban strategies. On the other hand, specific problems of Serbia are related to the possibilities of integration of special socio-economic groups, such as low income citizens, refugees etc. Having this in mind, it is understandable that Serbia is coping with even bigger problem of affordable and social housing, which has become an emergency even in cities with a weak demographic growth in developed countries. The problem of the lack of adequate affordable housing and its capacity is often followed by the problem of real social integration of vulnerable social groups.

The pressure of these problems is more visible in Belgrade, Serbian capital since it deals with the demographic pressure and growth for a long time, and especially in past two decades. As a consequence of this pressure many previously agriculture areas at the fringes of the city have become illegal settlements.

Being a developing country severely hit by economic crisis in past few years, Serbia will not easily reform its housing policy and enable growth of the affordable housing which will meet demands. It is also not very likely to expect that the problem of illegal settlements will vanish or even lessen since the actual Serbian political framework is encouraging legalization process.

So what is to be done? Is it realistic to treat such big issues of urban development separately? Or maybe it is possible to change the prospective and try use problems in the way they partly solve each other?

This paper will enlighten the problem of illegal housing in unconventional way – by trying to understand the illegal settlements as areas of social/affordable housing and social integration. It will also discuss the possibilities of urban upgrading and regeneration of illegal settlements making them liveable places and areas which can be integrated into the Belgrade development.¹

2 THE NEED FOR SOCIAL/AFFORDABLE HOUSING AND TACKLING URBAN GROWTH

Well-known statement is that appropriate housing is one of basic human rights (UN, 1948, art. 25th). It is usually interpreted as the affordability of decent and healthy homes. But the importance of appropriate housing as a human need is more complex issue today, since it also includes the questions of transport and public facilities as intermediate social needs (UN habitat, 2012, p. 33). Finally, housing is a good on the market, so the consequences of market trends are visible in patterns and conditions of housing. This is the reason why the integration of housing issue into wider spatial systems, such as cities and communities, is a necessity for urban development and growth.

Social (affordable, public, non-profit) housing is one of important ways to overcome the gap between social and economic aspect of housing. There are many definitions of all mentioned terms of the housing concept, depending on regional and historical conditions (UNECE, 2006, pp. 1-3), but the common ground for most of is the housing concept which is provided by government agencies or non-profit organizations for people on low and middle incomes or with particular needs. In continental Europe the term social housing is more familiar than other ones. This is also the main term in Serbian practice and legislature, although term affordable housing can be found in some new documents and policies, as well as in those in European Union – EU (Milić, 2006, p. 31). Because of this fact, this paper will use term social housing as the key term for this housing concept.

¹ This paper is done as a part of research project “Research and systematization of housing development in Serbia, in the context of globalization and European integrations, with the aim of housing quality and standard improvement” (TR 036034), financed by Ministry of education and science of Serbia.

As it was previously specified, the concept of social housing has strong historical and regional context. Generally, social housing is more familiar to the countries with social capitalism than those with liberal capitalism. The best examples are “old” EU countries, especially those in Western and Northern Europe, where social housing has been especially developed since The Second World War, passing through several phases (UNECE, 2006, pp. 1-3). Firstly, Post-war social housing was built for growing population on public land with public money (Whitehead, 2010). Its main characteristics were cheap mass production and the building on “free land”, usually on the outskirts of cities and towns, which produced “uniformization” and “ghettoization” of huge social housing areas during 60es and 70es. This was notably different from views of new generation of social housing occupants, who tended to be better educated, middle-income and less traditional in family issues.

These problems caused various new directions for social housing: from public building to public-private building corporations; from public ownership to several different ownership models, from new building to renewal and regeneration; from huge urban independent areas to small integrated quarters; from mass production to individualization and place-making; from low income persons to middle income ones; from nuclear families to different types of occupants (UNECE, 2006, pp. 1-3). There are also many regional and state-related differences and specificities. All these processes are flexible and never finished, so the field of social housing is still vivid and it represents a real support for permanent urban growth. Further impulse for these processes is the fact that the need for new housing has not decreased with well-known problem of aging population of EU in recent years. Relatively stable number of households, which are smaller and more heterogeneous, has given the new demand for various types of social housing (UNECE, 2010, p. 9). Finally, the model(s) of social housing in EU is used as a role-model for social housing policies and strategies all over the World.

Although the cities in developing countries face the similar problems about social housing concept and its realization, they also have to fight bigger problem than the cities in EU – taming the urban expansion, which is, in most cases happening out of the desired policies and plans. This is also the case with Belgrade, despite the fact that socio-economic path of Serbian capital was and still is different than of those in developing countries at other continents; nevertheless there are common effects and characteristics of spatial growth, with huge illegal settlements being most significant similarity. On the other hand, Belgrade’s urban expansion has not much in common with the neighbouring EU countries’ cities or even with ex-socialistic cities despite the geographical and historical link to them, with the exception of some Balkan cities.²

The magnitude of urban expansion is frightening when analysed through figures. According to the World Bank study (Shlomo, Civco at all, 2005.) cities in developing countries whose population is over 100,000 can be expected to triple their area, from 200,000 to 600,000 sq km until 2030. This means that every resident will convert, on average, about 500 sq m of non-urban to urban land.

² This standpoint is supported by Petrovic, M, claiming that the task of transforming from totalitarian to capitalist system stipulated post-socialistic cities of Europe to get some characteristics of American and even Third world cities, rather than of balanced models of EU cities (PETROVIC M.: The transformation of cities towards de-politization of urban issues, The Institute of Sociological Research, Belgrade, 2009., p. 251). Same author, going back to the question of ex-Yugoslav cities’ unique characteristics and/or similarities with other post-socialist cities, emphasizes that (they) resemble them in the slow pace of post-socialist restructuring and establishment of new types of public control, and respective elements of the Third World development (PETROVIC, Mina: Cities after socialism as a research issue. Discussion papers (LSE – South East Europe series), DP34, Centre for the Study of Global Governance, London School of economics and political science, London, 2005., p. 20). Finally, M. Petrovic concludes: “The most likely outcome is that ex-Yugoslav cities will become unregulated capitalist cities with more or less evident elements of Third World cities” (PETROVIC, Mina: Cities after socialism as a research issue. Discussion papers (LSE – South East Europe series), DP34, Centre for the Study of Global Governance, London School of economics and political science, London, 2005., p. 20).

Region	Definition
East Asia (China, Philippines and Vietnam)	Areas subject to urban expansion on the edge of cities (often called "rural-urban" areas or "peri-urban" areas) and environmentally fragile urban areas (e.g. river banks, canal edges and flood plains), which are unstable and unfit for occupation and should be protected to provide ecological services to cities. Spatially, this definition encompasses primarily marginal land (unstable and unfit for occupation) and land in the periphery of urban areas.
Europe and Central Asia (Albania, Kyrgyz Republic)	De facto urban areas that largely remain classified as agricultural. Largely comprised of informal settlements, which are not recognized by municipal governments.
Latin America and Caribbean (Argentina)	A wide strip of land that is too expensive for rural uses and yet too distant for urban purposes.
Middle East and North Africa (Egypt)	Localities where the rural-urban transformation is taking place – those vast areas that surround cities which are neither strictly rural nor urban. The existence of a large and disproportionate peri-urban segment is a central feature of African cities.

Fig. 1: Definitions of Peri-Urban Areas across Regions (Source: World Bank, 2008)

In general, the space within metropolitan areas can be categorized into 3 main types (1) urban cores, including central business district and the rest of the inner city; (2) suburbs, usually subdivided into the inner and outer and usually driven by residential expansion; (3) peri-urban areas which may be driven by industrialization and or spill-over effects from the city itself, depending on structure of the urban economy. The most of the urban expansion of course affects zones 2 (partly) and 3.

Urban expansion is expressed in different spatial forms – contiguous, leapfrogging, 'necklace' corridors, continuous corridors, etc. These different forms affect the overall efficiency, especially energy efficiency of cities a great deal. The bulk of rapid urban growth in developing countries is taking place in peri-urban areas. In many poorer cities spatial forms are largely driven by the efforts of low income households to secure land that is affordable and in location that is reasonably close to the places of work, often in peri-urban slums and informal settlements. There is also a trend induced by local governments to relocate inner city slum/informal dwellers to the urban periphery.

The growth of peri-urban areas is caused by different reasons: from enveloping previously rural settlements, to migration from other parts of the country, process of gentrification and other land use changes in the city core etc. The characteristics of per urban areas are as follows:

- Low density, mostly unplanned development, lack of infrastructure, mixed use depending on the economy of the city, rural and agricultural enclaves.
- Economic status of peri-urban citizens may vary, from high-income gated communities to low income housing, industrial areas and finally informal settlements and slums.

Depending on the mix of land use (residential/commercial) and infrastructure quality, these areas can often be squatter settlements, informal land subdivisions, not complied with building codes and constructed on the inappropriate land (such as landslides, flood plains etc.). Low income households often locate in the urban fringe as it offers access to affordable land and housing with minimal standards. Peri-urban areas grow rapidly in Latin America, east and South Asia, though are also seen in other parts of the world, such as South Eastern Europe.

According to the manual: Sustainable Land Use Planning – Peri urban growth, World Bank Institute, 2012, key challenges in peri-urban growth management are:

- Lack of effective regulations and management;
- Loss of arable land caused by urban expansion;
- Loss of land with environmental and cultural values;
- High cost of delivery of urban services associated with low density urban expansion;
- Inefficient transportation access in peri-urban areas;
- Lack of accessibility to services for low income communities in peri-urban areas;
- Vulnerability to hazard areas.

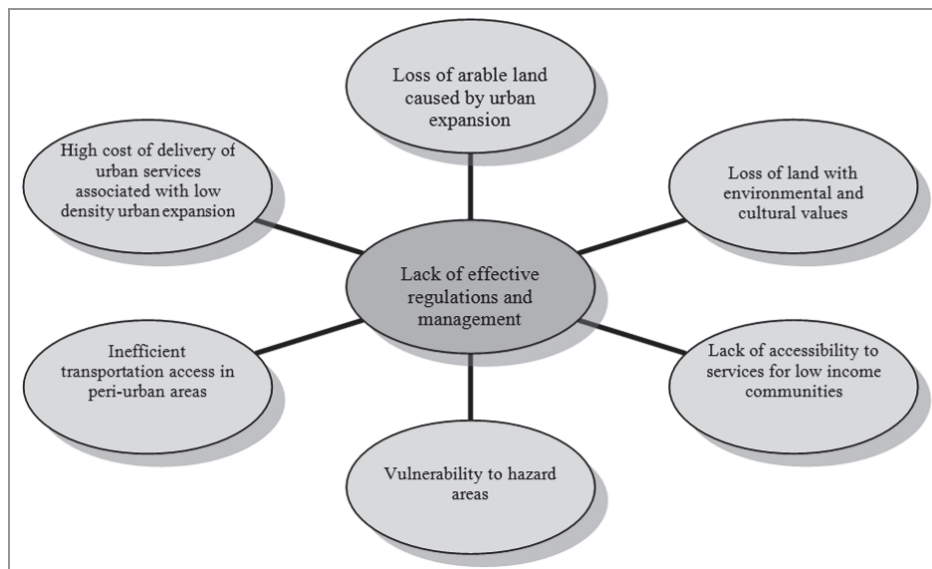


Fig. 3: Key Challenges in Peri-Urban Growth Management (Source: World Bank Institute, 2012)

Managing peri-urban growth and improving living conditions in peri-urban areas contribute to socioeconomic equity in the city as whole. The above mentioned document (World Bank Institute, 2012) names key interventions which include facilitating land tenure and management, increasing access to basic services which bring along environmental benefits, followed by service provision and regulatory coordination across jurisdictions. Cities in developing countries need to make realistic, minimal plans for urban expansion. The key areas for land use in those countries are: designation of adequate areas for accommodating projected expansion, investing in basic infrastructure to serve this expansion and protecting sensitive land from intrusion by new urban growth.

The discussion above undoubtedly shows the negative trends about land conversion and city growth globally and as a consequence, about the shrinking the agricultural and forest land while on the other side gives the possible directions for overcoming or lessening these negative impacts.

3 BELGRADE REGION DEVELOPMENT

3.1 Problems of incoherent urban and regional development, deficit of integrated urban strategies and tackling the urban growth in Belgrade

Belgrade, being by far the most vibrant city in Serbia over a long period, due to its diversity of economic activities, has been and still is a great demographic magnet. According to the official statistical data, 22.5 % of the country's population lives in the city, but unofficially there are more than 25 % of country population. Such trends have never been positive neither for Belgrade, making an enormous pressure about employment and housing, nor for the rest of Serbia, leaving many towns without adequate workforce and creating negative demographic situation. At the same time, Belgrade region has influenced greatly the development of other regions in the country, lessening the chances for balanced regional development.

Today, the economic profile of Belgrade is both oriented to the inner market as well as to the wider scene, aiming to be competitive in the country and region. Belgrade is defined as an organizational, administrative, service, educational, scientific and cultural centre. Among the most vibrant economic sectors of Belgrade core area is: construction industry, processing industry, wholesale centres, financial services and insurance companies and other business related activities. On the other hand, there are many insufficiently used possibilities, which are not adequately treated by most of actual plans, like development of tourism, culture and nodes, related to the position and intersection of European traffic corridors 7, 10 and 11.

Regional development of wider city area has never been actually balanced. Though Belgrade has adopted the Regional Physical Plan (Town Planning Institute of Belgrade, 2004), as well as other relevant planning documents, such as: Master plan of Belgrade 2021 (Town Planning Institute of Belgrade, 2003), Belgrade Development Strategy (Town Planning Institute of Belgrade and PALGO Centre, 2011) and several sectorial strategies (Energetics Development Strategy, Tourism Development Strategy, Forestation Strategy, Retail

Development Strategy, Agriculture Development Strategy, Civil Society Support Strategy and others), unfortunately most of the development and especially peri-urban growth has already happened before and during the plan-making process. Moreover, the documents, though been made at almost the same period, did not acquire the substantial level of integration and coherence. Additionally, the instruments for the implementation and the institutional and procedural support of mentioned documents were not adequate so the real realization has failed.

Belgrade has got its Master plan after many decades so this document had a tough assignment to cover both strategic as well as regulatory elements of development. According to the Master plan of Belgrade 2021, there is strong orientation to foster touristic, cultural and business potential of Belgrade by development along riverfronts. Such very important ideas, though not new, required a detailed implementation covering and huge financial support which was not easy to enable in trying transitional and period of economic crisis. In the wider area, especially along main traffic corridors (such as highway) there is a great potential for development of creative economy – industrial eco parks, smart zones etc., but still there is no adequate strategy of corridors' tributary areas.

Though city development policy is not oriented and is not officially supporting the informal housing and economy, it is estimated that informal economy takes as much as 30 % of economic activities, mostly in the field of retail, services, catering, manufacture and even construction industry (supporting building of informal settlements). At the same time, informal housing takes almost 44 % of housing areas in Belgrade. Despite the fact there are perfect brownfield locations in wider centre of Belgrade with good spatial development chances, the city growth unwillingly turned to the agriculture land at the outskirts of the city.

Some of the main issues related to the land use and city growth in Belgrade are:

- Illegal and unplanned settlements, which have grown and spread intensively over the Belgrade territory during more than 2 decades, with the exception of historical centre of Belgrade;
- Generally insufficient and /or weak infrastructure equipment in metropolitan Belgrade area, with the exception of core area and New Belgrade; urgent problems for the city as whole are related to the waste disposal and treatment of wastewater;
- Unfinished and insufficient traffic network, mostly manifested in lack of transit roads, bridges and mass public transport;
- Inadequate use of the most attractive areas and locations in the city, especially in the river coastal areas;
- Unequally dispersed greenery and the lack of real green network;
- Chaotic growth along the main traffic corridors.

The problem of illegal and unplanned settlements in Belgrade region is strongly related to the other problems of city development, sometimes being a cause, but more often being a consequence of complexity of spatial, economic, social and political issues.

3.2 Characteristics of housing in Belgrade as a reflection of socio-economic transformations

The major influence of mentioned EU social housing concept is noticeable in Eastern and South-Eastern European countries which in this field face(d) many challenges. East European countries have been in the process of transition, as a fast and sudden transformation of one recognizable system to another one (Pickvance, 2002, p. 195) for more than 20 years. The process of transition was also related to the field of housing. The exclusive model of state-provided housing in socialistic system was dramatically transformed in market-oriented housing model. "In almost all post-socialist cities radical reforms of housing and urban policy are seen as a necessary step because of their economic inefficiency and social ineffectiveness" (Petrović, 2005, p. 7). Good example is the percentage of public-owned apartments in these countries, where previous exclusive model of housing has dwindled to negligible percent of housing (UNECE, 2010, p.13). The main result of the transition of housing sector in Eastern Europe is overall deterioration of housing condition in many urban areas (Vukov, 2008, p. 19).

Among several regional types of housing transition is "Ex-Yugoslavian type" (with the exception of Slovenia) (Petrović, 2005, p. 15). This type shares many characteristics with housing types of other Balkan

countries, such as: under-urbanization, self-help housing construction, common lack of infrastructure and amenities, the absence of “classical” social housing and other publicly supported measures in housing sector and the extreme confrontation “urban centre–periphery” (Tsenkova, 2005, pp. 115-123). Other characteristics of the type are connected to the postponed or “blocked” transformation during the wars in 1990s (Petrović, 2005, p. 16), which are connected to the problem of refugees and illegal housing construction.

Good example of “Ex-Yugoslavian type” is Serbia, where a radical turn-over from previous state-provided housing system to market-oriented one is also visible. Some local specificities are: complete privatization of the sector, lack of appropriate regulatory mechanisms and strategies, strong influence of refugees, housing construction as extraordinary profit, illegal practice in housing construction, degradation of old housing fund, weak mortgage system, etc. (Mojović, Čarnojević, Stanković, 2009, pp. 6-11). This is particularly evident in Belgrade, which being the capital city, played a leading role in the transformation and the introduction of new types of housing, such as social housing.

On the other hand, the introduction of real estate market in the 1990s, with the characteristics of those of capital cities, marked by extreme economic crises and high poverty of most of its inhabitants, had the negative effect on the city development. Public sector stopped investment in housing production and maintenance and the number of dwellings built per year dramatically declined (Vujovic and Petrovic 2007). Private investors have entered the process of housing production, but the crises of local planning institutions and state power pushed them to the illegal sphere. On the other hand, market prices of the housing in the city were too big for most citizens and new migrants to the city, economically exhausted by sanctions, inflation and unemployment. As a result, for many citizens and migrants of Belgrade the only chance for acquiring accommodation was private building of modest huts on the periphery of Belgrade (Zegarac 1999). The problem was severely aggravated by the influx of refugees from the other parts of the former Yugoslavia, when approximately 100.000 of them have settled in Belgrade (Hirt 2009). During the 90’, the informal housing became a dominant form of housing development in Belgrade, ignoring the urban plans and legal frame. After 2000, political and other changes in Serbia resulted also in the expansion of building in Belgrade, bringing back the multi-family housing and construction of office buildings (Simeunecvic, Mitrovic at all, 2012). Within the total new building production, the amount of single-family housing has decreased, as well as the share of informal buildings.

3.3 Illegal settlements and housing in Belgrade

Since the overall study of the informal growth in Belgrade has never been made, there are no exact data about it, so the estimations vary. For example Janic (1998) estimated there were about 150.000 illegal housing units in Belgrade, while others say that only 20 % of the buildings in the peripheral areas were actually regulated by some urban plan (Djukic and Stupar 2009). Third approximation is based on the number of applications for the legalization – 147000 illegal buildings (Petovar 2005). We cannot take these numbers as final, since not all the owners of the informal housing applied for the legalization, while on the other hand the overall spatial analysis of the area and the approximate density will increase the figures for more than 25 %.

The largest informal housing settlements of Belgrade are situated at the North Eastern and Southern Belgrade outskirts, as well as on the left Danube river bank, expanding deeply to the north. There are other smaller settlements and scattered informal housing groups all over the city borders and within the city structure. In most settlements relatively convenient terrain for building prevails, with the exception of left Danube river bank. There is still a decent share of green areas. The concentration of buildings is the highest along the main traffic corridors. Dominant land use is for residential areas – approximately 90 % of total surface, but there is significant share of non-residential land use, such as retail, services and other commercial activities, mostly concentrated along the main traffic corridors. Traffic network is irregular and insufficient. Except the electrical network the infrastructure mostly does not exist. Some parts of the settlements are provided with water supply. Streets are narrow, without drainage and often are lined with large slope, so driving is difficult during winter period. There are almost no sidewalks for pedestrians. Since all kinds of transport overlap in a narrow corridor, safety is low. In the future, street regulation could be very difficult since it would cause massive demolishing of houses facing such streets in order to provide safe width of streets and sufficient place for infrastructure equipment.

One of the main problems about informal settlements' land use structure is lack of public spaces and services, such as schools, health and children day care facilities, which are a direct effect of illegal building process and absence of regulatory plans. Although the Institute of Urbanism Belgrade has started the draft version of regulatory solutions for whole Belgrade territory, including these areas, in 2010, it is not yet brought to public.

Urban structure of such housing areas is irregular and spontaneous. There is no firm urban matrix with defined size of blocks or parcels. Parcels are often irregular, not enabling good orientation and position of a house towards neighbouring houses. Therefore, privacy is often threatened since the space between houses is very narrow. Architectural design shows the spontaneous nature of building – houses are simply designed and in most cases without any particular characteristic of style. Decorations are rare and often inappropriately applied. The interior organization also lacks good architectural design but housing units are functional in its simplest meaning. Unfortunately, there are no reflections to the traditional Serbian housing.

There is a variety of social background of the informal housing dwellers. In the first group there are citizens of modest socio-economic background who have moved from other parts of the country in search for employment in Belgrade and they live and own smaller one-family units. Second group are refugees and people who have moved from other ex-Yugoslavian republics during civil war in 1990s and their economic status vary, so they live (and own) both in big houses – villas, as well as in smaller ones. Third group consists of residents – housing tenants of lower economic status who live in bigger houses, but rent the apartments, while the owners of these houses are of different background. Approximate socio economic structure of the population, given above, has significantly influenced the formation of settlements and size structure of the buildings.

Concluding, it is easy to say that instead of being respective residential area, with high quality of life, great green areas and good urban pattern with minimum of planning intervention, informal housing areas are mostly perceived as impersonal and disharmonized residential areas, being neither quite urban, nor rural settlements.

3.4 Possibilities of integration of special socio-economic groups (such as low income citizens, refugees)

As a result of the wars during the 90' in former Yugoslavia a large number of families had to leave their homes. Serbia has got the largest number of refugees in Europe – by 2008 there were 200.000 refugees, but other estimations say there were additional 220.000 refugees. Over past few years situation had changed for the better, but there is still a great number of refugees. One of the cities which have undertaken the most pressure of the new immigrants was Belgrade. Since Belgrade had not had ready building plots and building areas with completed infrastructure and traffic equipment, the city experienced an explosion of unplanned housing. In addition to this situation, the inhabitants of these illegally built areas in most cases did not have jobs and have been existentially threatened. Extremely difficult situation is in refugees' collective centres, where people live under very tough conditions – often whole family in the same room and with no sufficient sanitation. Most of the refugees' collective centres have been closed by 2012 but there is still significant number of it and they are problem for the inhabitants themselves, as well as for the local communities. On the wider territory of Belgrade there are still 17 informal and 7 formal refugees' collective centres, mostly located in several local communities: Palilula, Zemun, Rakovica, Zvezdara, Vozdovac, Cukarica, Grocka, Barajevo, Obrenovac. All mentioned kinds of settlements lack primary social infrastructure – above all there is lack of children day care facilities and older people nursing homes. There is also a lack of facilities for people with special needs, whose sharing in total population is greater than in other population groups because they had suffered stress and other specific health problems.

Besides refugees, who are the most important of targeted vulnerable groups for contemporary social housing in Serbia, there are several other socio-economic groups, who are seen as potential social housing users. Some of them are already included in programmes of social housing. This is in particular the case with Roma population, which is numerous in Serbian society (UNHS, 2008). The interest of researches about living conditions in Roma settlements and possibilities to their improvement are quite often and in focus of Serbian practice for a long time (Macura, Petovar, Vujović, 1997, p. 3). Other socio- economic groups are less pointed out.

Regardless of the above mentioned facts, it is interesting to notice the gap in perceiving the inclusion possibilities of these socio-economic groups by Serbian professionals, Serbian regulatory framework and

strategies, and foreign organizations, which are active in this sector in Serbia (for example, UN Habitat Serbia). Following table compares the similarities and differences in their views:

SOCIO-ECONOMIC GROUP	VIEW OF SERBIAN PROFESSIONALS ¹	VIEW OF SERBIAN REGULATORY FRAMEWORK AND STRATEGIES ²	VIEW OF FOREIGN ORGANIZATIONS IN SERBIA ³
Refugees	Very important group	Very important group	Very important group
Low income households	Very important group	Very important group	Very important group
Families with many children	Important group	Very important group	Less important group
Families with single parent	Important group	Important group	Less important group
Young families	Very important group	Important group	Important group
Single persons	Less important group	Less important group	Unimportant group
Older persons	Less important group	Important group	Unimportant group
Persons with special needs	Less important group	Very important group	Unimportant group
Ethnic minorities (<i>Roma</i>)	Important group	Very important group	Very important group
Students	Less important group	Unimportant group	Unimportant group
Seasonal workers	Less important group	Unimportant group	Unimportant group
Public sector employees	Less important group	Important group	Less important group
Comments:			
¹ Retrieved from: Milić, Vladimir: <i>Urbanistički aspekti socijalnog stanovanja</i> . Belgrade, 2006.			
² Retrieved from documents 1, 4, 5 and 6 in chapter 4.1			
³ Retrieved from documents 2 and 3 in chapter 4.1			

Table 1: Possibilities of inclusion of some socio-economic groups – the views of Serbian professionals, Serbian legislature and strategies of foreign-supported organizations in Serbia

In conclusion, it is inevitable to stress that comprehensive inclusion strategy of vulnerable social groups in Belgrade has not been made. The real challenge relates to the needed integration of social and spatial-psychical aspects of the problem of social housing.

4 THE POLICY OF SOCIAL HOUSING IN SERBIA AND EMERGENCY FOR AFFORDABLE AND SOCIAL HOUSING

4.1 Regulatory framework and policy of social and affordable housing in Serbia

Serbian regulatory framework and policy of social housing is relatively new and mainly without adequate „forerunners“. The key documents of the framework are (by chronological order):

1. Housing Law (1992, amendments 1993-2012) is the oldest important document for the topic. It is one of relatively long-lasting legislative acts in Serbia. This is even more important if it is known that this law has “survived” ex-Yugoslavian wars, crisis, significant political turmoil and several national assemblies. But, it has had 14 amendments, which indirectly have presented painful transition of Serbia in last two decades. This law is generally in sector of housing, so it regulates only key matters. The article No 2 is especially important for this topic, because it says that “State ... provides the conditions for the resolution of the housing needs of socially threatened persons” (PS, 1992-2012, Art. 2). But, crucial fact is that the law had been the only important act for the regulation of housing sector during long transitional period (1992-2006). Because of this it hasn’t been “adequate to the conditions of market economy” and it had not enabled “resolution of housing needs of socially vulnerable groups” (Petovar, 20054, p. 15).

2. The Study of Housing Sector of Serbia (2006) was the first policy after overthrow of Milošević’s authority. It is arranged as a review of legislative and other public actions in housing sector and it mainly deals with problems and understatements of previous period. Social housing sector is elaborated in one chapter. Special attention of the study is given to housing issues of the National strategy for refugees and displaced persons. This part presents various housing options with different building types, ownerships, kinds of construction and kinds of public support and is also connected to appropriate spatial distribution (UNECE/CHLM, 2006, pp. 58-59). This was certainly “refreshing” document for that period.

3. Publication “Four Strategic Themes of the Housing Policy in Serbia” (2006) is a document prepared by UN Habitat Serbia as a support for government institution and bodies. The field of social housing is directly

connected to Affordable rental housing, but its elements can as well be recognized in two other themes (informal settlements, inclusion of Roma population through housing). The main goal of this publication is defined set of recommendations for social/affordable housing development in Serbia and their connection to other housing problems, such are illegal settlements.

4. Social Housing Law (2009) is the most important legislative act in newer social housing practice in Serbia. The draft of the law was presented 2004, so Serbian society has waited for 6 years till it was adopted. The law especially deals with the issues of institutional context and financial aspect / ownership of social housing, giving several models. Other elements of social housing, particularly those related to spatial aspect, are not elaborated.

5. National Strategy of Social Housing (2012) is very new document, which is settled as an elaboration of Social Housing Law. Last part of the strategy proposes several models of social housing support, which are scarce in space-related instructions; they include basic standards of minimal space areas per occupants, but they do not include “urban dimension” (spatial distribution, typology, level of spatial intervention, links to land allocation, related public facilities and services, etc.).

6. Action Plan for Implementation of the Strategy (2012) is an addition to the strategy related to their implementation. It is more detailed document and it includes more spatial-related elements. Some terms and “word constructions” are interesting to debate for the purpose of this research. The usage of term стан (eng. housing unit, but also apartment) is by far more present than the usage of term кућа (eng. house, especially single-family house). The term кућа is only mentioned one time and connected to village areas, which are also mentioned only once. In accordance to expression of the action plan, it seems that dichotomy apartment building-single-family house is equalized with dichotomy urban-rural social housing. Besides, there are no actions aimed to improve urban context of socially supported housing (including any action targeting illegal settlements).

All listed documents guide to the conclusion that there are very few actions of spatial-related elements of social housing. Present actions are usually focused to basic architectural elements, without clear connection to “urban dimension”. In some cases, they seem “narrowed” and even contradictory to rich contemporary EU practice. Then, although the current connotation of illegal settlements in Serbia is well-explained in most of the documents, distinct solutions for their improvement as a social housing action are not presented. Finally, in accordance with presented regulatory framework and policy in Serbia it can be concluded that state institutions and bodies do not define strictly any model and/or building type of social housing as role-model for implementation “in situ”.

4.2 Practice and typology of social and affordable housing in Serbia

In situation of newly introduced legislative and policy framework without strict directions and instructions practice is always trying to find other markers for undefined issues. Social housing sector in Serbia is not an exception, especially about the issues such as a typology, position in urban territory. The testing for the argument will be short analysis done in several cases of new social housing in Serbia, with the focus to Belgrade cases.

Dominant building type of new social housing is a building with numerous apartments. Programme propositions strictly specified this building type in many cases (UNHS, 2009, pp. 41-44). This type of construction was implemented even in urban quarters with predominant other type of housing – single-family housing. In the terms of social integration, this is even more illogical proposition, having in mind the social background of future dwellers – mostly refugees ((Vujošević, Žarković, 2009, pp. 21-22), who usually had lived in rural areas with low-density housing types. Partial exceptions are few cases with small buildings with several apartments, which are easily noticed and positively appraised by new dwellers (UNHS, 2009, pp. 50).

All social housing programmes were organized with cooperation of local authorities, who were responsible for adequate locations (Vujošević, Žarković, 2010, p. 24). One of the criteria was to choose locations that are public properties and it limited resources in Serbian towns. This occasion dictated many propositions for new projects. Majority of social housing projects are consequently smaller interventions (usually one building with yard) with random position in urban structure, which is sometimes with totally different typology.

Other actions in social housing sector were directed to the regeneration of existing social housing stock. They are usually directed to various types of structures (detached houses, houses in row, transformation of collective refugee centres). Even though these cases were more similar to the Serbian context, they are named as “alternative housing solutions” (UNHS, 2009, pp. 61-62). The name can be understood indirectly as a negative or less-important connotation.

If all mentioned conclusions are put in the context of Belgrade as a capital, they become even more serious. All examples in Belgrade area are buildings with numerous apartments (according to the web site of The Society of Belgrade Architects) usually organized in huge urban blocks, provided by the city or state. These cases are often in more isolated positions (at edges of city) with weaker public transport and services. Because of that, they are completely related to older examples from the West, which have been “the personification of uniformization and “ghettoization”. Therefore, their success is clearly doubtful.

4.3 Wider picture: Does the regulatory framework on planning and building in Serbia encourage illegal building?

Since 1996. there is continuity in regulatory framework in Serbia of encouraging informal sector. This is the statement many would argue about, but the fact is that several laws, appendixes and other regulation and legislative material have treated the informal/illegal sector without much success. The first document which has treated this issue was the appendix to then-in-force Planning law (1993.). The intention supposedly was to tame the illegal building by enabling the legalization of then-existed buildings built without permits or out of borders of actual plans, while future illegal building was strictly forbidden. After that, two Laws on planning and building came into force (2003 and 2009), both with several amendments and both, along with amendments, treated the illegal building again substantially in the same manner as the first one. All laws and regulation have emphasized the importance of placing the informal growth into legal framework and at the same time banned its future growth. While the intention was probably good, the measurements and instruments for its implementing were poor. Namely, the state and local governments and the administration did not have the capacity to support and realize such measures defined by law. The inspection bodies also suffered from the lack of capacity and other means of preventing new informal growth, while they were not quite empowered to implement the regulations by demolition of the illegal houses. As the illustration of the above said can serve the fact that less than 1 % of total number of illegal buildings in Serbia have been demolished. On the other hand, very well spread corruption was hand in hand with the informal sector supporting it, so the illegal settlements were flourishing and have expanded a great deal. As the consequence, many regulatory plans have been made with sole function to legalize the expanded informal settlements, instead of being the strategy for the future development.

Furthermore, the newly prepared amendments of the Law on planning and building (2013), which are adopted by the state Government but not yet adopted by the Assembly, propose that every building in Serbia, regardless of their ownership status should be noted by the cadastre (practically free of charge) and therefore would seem as building with building permits. While there are, beyond doubt, many positive effects of the proposed amendments it is important to emphasize the possibility of equalizing illegal and legal buildings as a negative effect in the context of this paper.

As the (theoretically, but not fully practically) rigid framework of banning illegal building sector does not work and the old policies seem to have failed, maybe it is the time to admit that changes in the attitude has to be made. All the above stressed leads us to conclusion that, instead of turning head off the fact that it is not possible to fully tame or prevent the illegal city growth, is not it better to embrace it and fully integrate into the planning frame and social housing policy and legislation?

5 CONCLUSION – THE ILLEGAL SETTLEMENTS AS AREAS OF SOCIAL/AFFORDABLE HOUSING AND SOCIAL INTEGRATION

The extensive discussion about the city growth, urban land management, informal settlements and housing sector made us question most of the conventional approaches to solving both the problem of illegal settlements and informal urban growth on one hand, and of the social housing in Belgrade on the other. The above mentioned sectorial policies and regulatory framework, as well as international strategies and instructions for overcoming the stressed problems of a contemporary city in developing countries seem to have been made to be implemented separately, not integrated with other aspects, problems and possible

solutions. Each trying to function on its own, they fail to acknowledge the ‘bigger picture’ and to ‘think outside the box’. What we propose is the reviving of holistic approach by observing the problems overlapped in spatial, social, financial, environmental and other context.

In order to be able to do that, it is necessary to change the prospective and conventional way of thinking of the problem. First of all, instead of thinking of informal sector as of the outlaws and invisible, let us try to treat it as reality. The social structure of the inhabitants and owners of the informal housing sector leads us to conclusion that this form of habitat has certainly gained some qualifications of the social housing as well. Furthermore, the informal settlements and their inhabitants, by self-making process of their homes, have surely lessened the pressure of the population that would require a habitation in the field of social/affordable housing sector.

In order to make the idea more feasible, some future steps are proposed:

- The change in the perception of informal settlements as of undesirable, non-appropriate form of housing, far from legal framework and professional standards, that has only to be exterminated;
- The change in the social housing sector legislation as well as in the planning and building sector legislation in the way they become more comprehensive and integrative, embracing each other; furthermore, the legislative and regulatory framework of social housing should be more open to the public and private sector partnerships, as opposed to the actual practice of leaving it solely to the public sector; this could be the opening of the possibilities to include informal sector housing owners into the legal framework;
- The change in social housing typology so that it accepts and further develops other spatial and physical forms of social housing than it was the case in past, leading to greater diversification of types, including the transformed types of informal buildings;
- Acknowledging the values of the informal sector when possible, as opposed to the prevailing absolute criticism towards it; possible qualities of informal settlements, having in mind the spontaneously formed types in Belgrade, could be related to the relatively good quality of applied building materials in many cases, the size of the dwellings and its plots and most of all recognizing the amount of the greenery in the settlements. In order to recognize these values and of course for many other reasons, it is necessary to undertake a comprehensive research and study about the informal settlements and provide a reliable information data;
- Redefining the possibilities of upgrading the informal settlements so that they achieve newly defined standards of social/affordable housing.
- Other future steps and research required should refer to:
 - Institutional support in the form of new body assigned to assist upgrading informal sector/settlements, providing adequate services, traffic and infrastructure network;
 - Legislative support at local level and preferably also at state level when possible; since local government level is seen here as more willing to adjust in short time, a set of local measures and instruments to support urban upgrading of informal settlements are more likely to happen. This would include stimulations for houses and owners who invest an effort to meet social housing criteria, criteria of basic infrastructure equipment, energy efficiency, etc. The process should empower local tenant associations, neighbourhood organisations, builders from the informal sector, third sector social service providers (health, education, social provision, etc.) to improve existing settlements;
 - Specific education process (e.g. short term courses) for local communities with the aim to train them to assist in implementation of this idea.

Bringing new ideas about working positively with existing informal settlements as a contribution to housing the local population instead of rejecting them or worse still trying to demolish such fixed capital investment, Belgrade could become a pilot area for experimenting with such alternative institutional arrangements and cooperative forms, supported by university research.

There should be a balance between formal and informal sector. The presence of informal sector might be stimulating and encouraging for formal sector, as opposed to the common and prevailing opinion that they

have to exclude each other. The treatment of informal sector should be related to the local characteristics and cultural and social background and other relevant aspects and fields. Cutting the informal growth in the surgery manner during the economic and transitional crisis is neither effective nor wise. It is not possible and not useful to define one pattern applicable all over the world, though there are similarities about informal sector worldwide. Though we are in the era of global economy and under the influence of global forces, it is local resilience that will make our cities survive.

6 REFERENCES

- DJUKIC, Aleksandra, STUPAR, Aleksandra: Unplanned Settlements, (Un) Expected Problems: 'Green' Solutions for Low Carbon Serbia?. Porto, 2009.
- HIRT, Sonia: Belgrade, Serbia. In: *Cities*, Vol. 26, pp. 293-303, 2009.
- JANIĆ, Miodrag: Osnovni program za preporod Beograda. Belgrade, 1998.
- MACURA, Vladimir, PETOVAR, Ksenija, VUJOVIĆ, Sreten: Siromašna područja Beograda – Prikaz stanja i mogućnosti poboljšanja uslova življenja (The Poor Areas of Belgrade – The Review of Present State and Possibilities of Upgrading of Life Conditions). Beograd, 1997.
- MILIĆ, Vladimir: Urbanistički aspekti socijalnog stanovanja (The Urban Planning Aspects of Social Housing). Belgrade, 2006.
- MOJOVIĆ, Đorđe, ČARNOJEVIĆ, Vlastimir, STANKOVIĆ, Živorad: Lokalna stambena politika (Local Housing Politics). Belgrade, 2009.
- PARLIAMENT OF SERBIA – PS: Закон о становању (Housing Law). Belgrade, 1992-2012.
- PARLIAMENT OF SERBIA – PS: Закон о социјалном становању (Social Housing Law). Belgrade, 2009.
- PETOVAR, Ksenija: Illegal Construction and Usurpation (Bespravna izgradnja i uzurpacija). Belgrade, 2004.
- PETROVIC, Mina: Cities after socialism as a research issue. Discussion papers (LSE – South East Europe series), DP34. London, 2005.
- PETROVIC Mina.: The transformation of cities towards de-politization of urban issues, The Institute of Sociological Research, Belgrade, 2009.
- PICKVANCE, Chris (2002). State-Socialism and Their Urban Patterns: Theorizing the Central and Eastern European Experience. In: *Understanding the City*. pp. 183-203, Oxford. 2002.
- SHLOMO, Angel, CIVCO, Daniel, SHEPPARD, Stephen: The Dynamics of Global Urban Expansion. Washington, 2005.
- TSENKOVA, Sasha: Trends and Progress in Housing Reforms: In South Eastern Europe. Paris, 2005.
- UNITED NATIONS (UN): Universal Declaration of Human Rights. New York, 1948.
- UN HABITAT: Sustainable Housing for Sustainable Cities: A Policy Framework for Developing Countries. Nairobi, 2012.
- UN HABITAT Serbia – UNHS: UN-Habitat Joins Partners of the Decade of Roma Inclusion. Belgrade, 2008.
- UN HABITAT Serbia – UNHS: SIRP Book: The Settlement and Integration of Refugees Programme in Serbia 2005-2008. Belgrade, 2009.
- UNECE: Guidelines on Social Housing: Principles and Examples. New York and Geneva, 2006.
- UNECE: The Relationship between Population and Housing. Geneva, 2010.
- UNECE/CHLM: Студија стамбеног сектора Србије (The Study of Housing Sector of Serbia), Belgrade, 2006.
- URBAN PLANNING INSTITUTE OF BELGRADE: Генерални план Београда 2021 (Master plan of Belgrade 2021). Belgrade, 2003.
- URBAN PLANNING INSTITUTE OF BELGRADE: Регионални просторни план административног подручја Града Београда (Regional Psychical Plan). Belgrade, 2004.
- URBAN PLANNING INSTITUTE OF BELGRADE, PALGO CENTRE: Стратегија развоја града Београда (Belgrade Development Strategy). Belgrade, 2011.
- VUJOŠEVIĆ, Marija, ŽARKOVIĆ, Branislava: Социјално становање у заштићеним условима: Истраживање о оствареним резултатима пројекта (Social Housing in Protected: The research about Achieved Results of Project). Belgrade, 2009.
- VUJOŠEVIĆ, Marija, ŽARKOVIĆ, Branislava: Живети као остали свет: Социјално становање у заштићеним условима – подршка за достојанствен живот (Living as Other People: Social Housing in Protected Conditions – Support for Dignified Life). Belgrade, 2010.
- VUJOVIĆ, Sreten, PETROVIC, Mina: Belgrade's post-socialist urban evolution: reflections by the actors in the development process. In: *The Post-socialist City: Urban Form and Space Transformations in Central and Eastern Europe after Socialism*, pp. 361–384. Dordrecht. 2007.
- VUKOV, Danijela: Saradnjom do ravnomernog urbanog razvoja (From Cooperation to Balanced Urban development). In: *CESS Magazin*, Vol. 8, pp. 19-20. Novi Sad, 2008.
- WHITEHEAD, Christine: Sustainable Options for Government Interventions in the Housing Market. Belgrade, 2010.
- WORLD BANK: Peri-Urban Discussion Series. 2008.
- WORLD BANK: Exploring Urban Growth Management Insights from Three Cities. June 15 2008.
- WORLD BANK – East Asia Update: Sustainable Development in East Asia's Urban Fringe. April 2007.
- WORLD BANK INSTITUTE: Sustainable Land Use Planning – Peri Urban Growth. 2012.
- ZEGARAC, Zoran: Illegal construction in Belgrade and the prospects for urban development planning. In: *Cities*, Vol. 16/ 5, pp. 365-370. 1999.

7 BIBLIOGRAPHY

SIMEUNCEVIC RADULOVIC Sanja, MITROVIC, Biserka, RALEVIC, Miodrag, DJUROVIC, Mladen: Informal Growth of Housing in Belgrade under the Impact of Transition to Global Economy. Milano, 2013.