

Serbian Spatial Planners Association organizes for the **Seventh time academic symposium** with international participation  
**PLANNED AND NORMATIVE PROTECTION OF SPACE AND ENVIRONMENT**



**The city of the future in Aspern Seestadt in Vienna -  
and follow up in Neusiedl am See**

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## PREFACE

Humanity is now experiencing the most rapid transition of its history – a transition that has been far more rapid than that which took place following the introduction of agriculture and the spread of urban civilization. These few words had been written some 50 years ago, by Harrison Brown in his masterly synthesis on the condition of human mankind.<sup>1</sup> And the noble prize winner Albert Einstein wrote annotating this book: “The latest phase of technical-scientific progress, with its fantastic increase of population, has created a situation fraught with problems of hitherto unknown dimension.”<sup>2</sup> In 1980 Jimmy Carter was writing to the congress of the United States: “the Earth’s carrying capacity – the ability of biological systems to meet human needs – is being threatened by human activities.”<sup>3</sup> And 30 years later Alex Steffen<sup>3</sup> gives warning about the planetary boundaries that represents the earth’s ability to sustain life: “It’s crystal clear that humanity has pushed nature beyond its biocapacity and has overshot the planet’s limits.” The “Western model” of development, Alex Steffen is demonstrating, “There is no way the whole world could get rich the way Americans and Europeans did, even if we didn’t care about the consequence.” The consequences are to replace the model of development with a new one. Continuing the ‘status quo’ another ten or twenty years will make it impossible to solve our societal, ecological and economic problems. Therefore we will **create a bright green model** of development within a IP in Neusiedl am See,

One of the real success stories of the European Union are Europe wide **educational programmes**. Europe has become many chances within its’ Higher Educational programmes for obtaining a peaceful and democratic development process inspired by these values and also by Environmental Education principles. If I were to sum it up, says Jeremy Rifkin, I would say that Europe has become a giant freewheeling experimental laboratory for rethinking the human condition and reconfiguring human institutions in the global era.<sup>4</sup> The **European Dream** emphasizes community relationships over individual autonomy, cultural diversity over assimilation, quality of life over the accumulation of wealth, sustainable development over unlimited material growth, deep play over unrelenting toil, universal human rights and the rights of nature over poverty rights, and global cooperation over the unilateral exercise of power. (Rifkin: p.3)

The challenging tasks of the European Union are asking you to think and work in a cross disciplinary or better trans-disciplinary manner. A network of excellence called ACADEMIA DANUBIANA has been established at the University of Natural Resources and Life Sciences (BOKU) in Vienna, to promote a higher degree of territorial integration with the accession countries within the Danube region. The ACADEMIA DANUBIANA focuses on a scientific and educational network within various disciplines and paradigms in planning. <http://academia-danubiana.net>

<sup>1</sup> BROWN, Harrison (1954): The challenge of man’s future. N.Y: The Viking press

<sup>2</sup> U.S. Government Printing Office (1980): Environmental Quality, the eleventh annual report of the council on environmental quality. Washington D.C., p. iii

<sup>3</sup> STEFFEN, Alex (2012): Worldchanging: A User's Guide for the 21st Century, p.17

<sup>4</sup> RIFKIN, Jeremy (2004): The European Dream. Cambridge: Polity Press, p.83

## INTRODUCTION

In July 2011 the association 'Gartenpolylog' was inviting me to come to Aspern Seestadt and tell the gardeners and urban farmers about permaculture. It was a great pleasure for me to present the philosophy and principles of permaculture a group of highly motivated people about establishing community gardens for the new town in Aspern. A group of gardeners has already established near the central information centre 'Flederhaus' small parcels of land for vegetables.

The visionary development of the city quarter Aspern in Vienna's 22nd municipal district Donaustadt is emblematic of the future-oriented positioning of Vienna. During the next 20 years, a forward-looking city of the 21st century will emerge on the biggest area earmarked for urban development across Vienna's entire municipality territory, says the mayor of Vienna, Michael Häupl. The enlargement of the European Union has pushed Vienna from the geopolitical periphery into a central position with historically evolved good neighbourly relations and huge economic growth potential. In this context, Aspern has become an important strategic area for Vienna's urban development, which is reflected in the focuses defined by the Vienna Urban Development Plan 2005, which identifies the target area U2 Donaustadt/ Aspern Airfield as one of the 13 hot spots of urban development.



aspern Vienna's Urban Lakeside will be a modern economic hub at the heart of the booming CENTROPE Region. In the city of the future, it will be a matter, first and foremost, of satisfying the needs of people for a high quality of life with concurrent sustainable development.<sup>5</sup> That means a residential area or an urban region, which, with the use of intelligent, green technologies, will become a "zero emission city" or "sustainable urban region" where the people will live sustainably.

This calls for new models of design of spaces (e.g. shared spaces) – says Isabella Kossina from the Wiener Stadtwerke. Maria Vassilakou the Deputy Mayor and Acting City Councillor of Vienna has "the opinion, that this is no longer only a question of technology but also of basing the transformation of our cities in the direction of sustainability very directly on people."

The idea this year is to continue the idea of public community gardens also in Neusiedl am See. The Institute of Soil Science at BOKU in cooperation with the Academia Danubiana organizes in 2013 a Sokrates Erasmus **Intensive programme** for a "Permaculture Design Course-The city of the future" in the Neusiedl am See. For continuing these efforts in the future in cooperation with urban planners and local stakeholders, we will work with students from different countries and know how to establish landscape design measures for implementing several community gardens and patterns for a new model of the city of the future. The Application Form 2011 for IPs can be downloaded on the OEAD website<sup>6</sup> also the handbook<sup>7</sup>. In close cooperation with representatives from the City municipality of Neusiedl am See and local representatives and students from the Danube region will work on new models for the city of the future. We will invite universities from Danube countries (SK, BG, SI, HU, RS) and also students from Western European countries like DE, FR, PT. The main financial support will be done by funds of an Intensive Program. (see also file nr.22<sup>8</sup>)

<sup>5</sup> Austria's Smart Cities & Regions <http://www.smartcities.at/home-en-GB>

<sup>6</sup> [http://www.oead.at/fileadmin/III/dateien/lebenslanges\\_lernen\\_pdf\\_word\\_xls/erasmus/intensivprogramme/2011-12/ip\\_antragsformular\\_11-12.pdf](http://www.oead.at/fileadmin/III/dateien/lebenslanges_lernen_pdf_word_xls/erasmus/intensivprogramme/2011-12/ip_antragsformular_11-12.pdf)

<sup>7</sup> [http://www.oead.at/fileadmin/III/dateien/lebenslanges\\_lernen\\_pdf\\_word\\_xls/erasmus/intensivprogramme/2011-12/ip\\_handbuch\\_2011-12.pdf](http://www.oead.at/fileadmin/III/dateien/lebenslanges_lernen_pdf_word_xls/erasmus/intensivprogramme/2011-12/ip_handbuch_2011-12.pdf)

<sup>8</sup> [http://www.oead.at/fileadmin/III/dateien/lebenslanges\\_lernen\\_pdf\\_word\\_xls/erasmus/erasmus\\_allgemein/2012-13/era10\\_ip\\_de.pdf](http://www.oead.at/fileadmin/III/dateien/lebenslanges_lernen_pdf_word_xls/erasmus/erasmus_allgemein/2012-13/era10_ip_de.pdf)

## FOLLOW UP IN NEUSIEDL AM SEE – THE CITY OF THE FUTURE

### 1.. UNDERSTANDING THE CASE

For **understanding** the case of a real-world problem within its history, constraints, dynamics, and uniqueness we need key epistemics of cognition by empathy, feeling, pictorial representation in memory and intuitive comprehension. For identifying the problem, goals objectives and aims have to be defined. We will work during the workshop with four topics:

#### **First: Ecology - Agriculture and Forestry**

At the International Conference on Human Ecology, Prof. Marina Fischer –Kowalsky was presenting the topic of “Socio-metabolic transitions and the changing role of cities”. She was referring to the historical *great transformation* from an agrarian to an industrial socio-ecological regime Europe, North America. She was demonstrating “that the role of cities, constraints as well as potential, is fundamentally different in an agrarian in contrast to an industrial regime, and was analysing what follows for a possible next transition. Most commonly, a transition towards more sustainable patterns of production and consumption, that is a more sustainable social metabolism, is equated with the problem of abolishing a highly wasteful industrial lifestyle.”<sup>9</sup>

Prof. Kromp-Kolb was illustrating at the opening session of PDC-AS last year in Aspern Seestadt, proposals for alternative lifestyles, which we will work on this year.

Prof. Ivica Kisic and PhD. Daria Bilandzija will provide a lecture about ‘ecological footprint’ and present a ‘Introduction in organic agriculture’. “Approximately 90-95% of total world food we produce on or in soil.” Daria will talk about the “Influence of different tillage systems and crops on emission of CO2 from soil. Darija is measuring the CO2 under different tillage systems since 2011.” Sen. Lect. Tomaz Prus will prepare and present a lecture about balance between agricultural and forest land use as well as principals of combining both with natural protected areas. The lecture will include also discussion of endangered resources as peat and global efforts for peatland’s rehabilitation.

If we use less total energy than we do now, even if people all as wealthy with an appropriate lifestyle as the average European, experts call this ‘**the conservation bomb**’.<sup>10</sup> “We are used to measuring our impact in terms of watts. World wide energy use averages of 17.500- kilowatt-hours per person per year. But the ‘2000-watt society’, a Swiss version of sustainability, is about both energy and climate fairness, which is feasible for Switzerland.”<sup>11</sup> Amory Lovins, head of the Rocky Mountain Institute said, that the 2.000watt society could work even in the United States.<sup>12</sup> The Centre for Alternative Technology’s pioneering project Zero Carbon Britain has been recognized in RenewableUK’s first Energy Awards. Just download the full report on:<sup>13</sup>

Redesigning systems to create carbon-neutral, zero-waste, livable communities will not even slash the ecological impacts of growth in those cities, but will also help build models for development that are cheaper and more replicable in other cities across the planet. P194 Copenhagen has moved forward with aggressive plans to become the first CO2- neutral capital in the world by 2025. P.197<sup>14</sup>

#### **Second. Architecture and Spatial Planning.**

Christopher Alexander and colleagues presented a powerful new theory of design with important ecological ramifications in *A Pattern Language* and the *Timeless Way of Building*.<sup>15</sup>

Until recent times the prevailing architectural design and spatial planning epistemology considered built up and geographical areas as technical, social and economic entities for classifying, profitable use and exploiting. “For our purposes, let us define **design** as the intentional shaping of matter, energy,

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<sup>9</sup> International Conference on Human Ecology, Manchester, UK, June 29th to July 3rd 2009  
[http://www.kinderumweltgesundheit.de/index2/pdf/aktuelles/10399\\_2.pdf](http://www.kinderumweltgesundheit.de/index2/pdf/aktuelles/10399_2.pdf) p.4

<sup>10</sup> World changing. P.137

<sup>11</sup> 2000 Watt society: [http://www.stadt-zuerich.ch/portal/en/index/portraet\\_der\\_stadt\\_zuerich/2000-watt\\_society.html](http://www.stadt-zuerich.ch/portal/en/index/portraet_der_stadt_zuerich/2000-watt_society.html)

<sup>12</sup> World Changing p.139

<sup>13</sup> ZERO CARBON BRITAIN <http://www.zcb2030.org/>

<sup>14</sup> KOPENHAGEN – The first Carbon Neutral City in the World. <http://denmark.dk/en/green-living/copenhagen/>

<sup>15</sup> ALEXANDER, Christopher et al.(1977): *A pattern Language*. N.Y. Oxford University Press. p. xviii

and process to meet a perceived need or desire. Design is a hinge that inevitably connects culture and nature through exchanges of materials, flows of energy, and choices of land use.” (Van der RYN)<sup>16</sup> Therefore we invite all of you to be designers in shaping the physical details of your profession and daily experience, aggregating your ideas for human purposes. For being an important player with smart-city technologies today, we have to take into account our common prodigious wisdom with accepted knowledge of appropriate technologies. Prodigious built up structures of former times “goes to the roots of human experience and is thus of more than technical and aesthetic interest. Moreover, it is architecture without a dogma”.<sup>17</sup>

**InEcological design** is a system of assembling conceptual, material and strategic components in a pattern which functions to benefit life in all its forms. It implies any form of design that minimizes environmentally destructive impacts by integrating itself with living processes to minimize resource depletion, preserve water cycles and respects species diversity, etc. Prof. Borislav Stojkov, Prof. Viktorija Aladzic, Prof. Tatjana Capuder-Vidmar, Prof. Werner Kvarda will explain examples for the future of Neusiedl am See by using the ‘Pattern language’ from Christopher Alexander. In this session everyone is a participant designer in which technical disciplinary languages and barriers are exchanged for a shared understanding of the design problem. We honour the special knowledge that each person brings.

### **Third: Solidarity Economy**

Ecological footprints and carbon footprints, which we can measure using simple online quizzes, provide us with a metaphor for understanding how is our consume impact on the planet. In solidarity economy, the meaning of sustainability include also *social sustainability*, and we could say that “*In the city of the future, it will be a matter, first and foremost, of satisfying the needs of people for a high quality of life with concurrent sustainable development*”. “It is now known that we cannot abuse of natural resources, as well as we cannot exclude individuals from the economic system – especially because if we do so, we have collateral problems more difficult to deal with (violence, social security, health problems, soil degradation, etc), and that's why solidarity economy can give alternative and creative answers for problems that the capitalist system have been unable to deal with (elder society, long life learning, inter-generational activities, etc). It is also important, for improving our sustainable economy, to think in creative solutions for waste materials and how to reintroduce what would be "waste" as value on the supply chain.

Prof. José Manuel Henriques, Prof. Winfried Blum and Roberta Schwambach will explain the principles of solidarity economy with a special focus on local development and how, with simple changes in our choices/levels of consumption, society can decrease (individual and regional) impacts and achieve carbon neutrality - all based on representative consumer and life style choices.

### **Forth: Culture and identity**

Our countryside in Europe is characterized through centuries by a richly structured landscape with high biological diversity. This cultivated landscape has resulted from extensive management. The identity of our cultural landscapes shows a high variety of typical forms, structures and patterns influenced by the climate, the topography, the altitude of the land and its peoples living there. Especially in architecture we will find various forms of elements and details, which we call vernaculars.

**Vernacular architecture** has shown evidently for all the centuries a ‘architecture without architects’. In the past all design and construction was guided by a collection of communally adopted planning principles called **patterns**. “A pattern language is a system which allows its users to create an infinite variety of those three dimensional combinations of patterns, which we call buildings, open spaces and cultural landscapes. The essential feature which every pattern has, is that it forms the basis for a shared agreement in a community.

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<sup>16</sup> VAN DER RYN, Sim / COWAN, Stuart (1996): Ecological design. Washington D.C. \* Covelo, Cal.: Island press, p.146

<sup>17</sup> RUDOLFSKY, Bernard (1977): The Prodigious Builders. London: Secker&Warburg.

## 2.. CONCEPTUALISING

The new-fashioned point of view about permaculture is a **transdisciplinary** way of planning to communicate innovative knowledge with experts and the participants of the design course, and also with local stakeholders. Today we need a new approach of mutual learning between science and society. If we want to do joint problem identification and solving among science, technology and different stakeholders in society we have to learn about transdisciplinarity. Transdisciplinarity is a new form of learning and problem solving involving cooperation among different parts of society and academia in order to meet complex challenges of society. Transdisciplinarity requires methods that allow integration of knowledge with respect to at least four dimensions. [KLEIN, 2001]

Amongst science we are conceiving as a whole the knowledge of certain fields of activity. Philosophers call a filter that determines what counts as knowledge an **epistemology**. The point is, we need freedom of research and education, where basic principles of knowledge get reflected and common knowledge is not getting strained, but rather accepted to be challenged. "For instance conventional science is repressing radical innovations, because they will shake to the core essentially their basic items."<sup>18</sup> According to Thoms S. Kuhn a paradigm shift was called a scientific revolution by epistemologists, when scientists encounter anomalies which cannot be explained by the universally accepted paradigm within scientific progress has thereto been made.

The **paradigm shift** has found uses in other contexts, replacing the former way of thinking. For instance permaculture in relation to ecological farming is not only the production of food supply considering careful methods of production for preserving nature. The difference as we can recognise is that permaculture is an interdisciplinary field of research, aiming to achieve a lively future and to increase the vital necessities and the well-being of humanity. Therefore we are inquiring into the ecosystem of the earth, from a global point of view with regard to the region down to the local dimension.

**Future search conferences** as a new planning-process will bring people together with diverse interests to create shared vision, innovation and collaborative action and do joint planning. For establishing an **interdisciplinary approach**, we will uncover what people already know about ecology, showing how more useful in design permaculture principles. will ask the people to and ideas on a particular then making group strips.<sup>19</sup> First we will which may have conse-



quences to our work. challenges for the project are **mind mapping**. In a next be evaluated with the help of This method allows all the

participants to quickly gain an overview of the complexity of the issue. The group then moves to sort these trends into desirable and probable **categories**.

Within the **second week** the participants will work within individual groupwork on their projects. We will continue on the results of the masterplan with transparent planning about open space permaculture concepts.

We will publish the **lectures** from the experts, the **teaching material** as a permaculture guide, the **case studies** from the students and the **results** from the project week.

<sup>18</sup> KUHN, Thomas S.(1967): Die Struktur der wissenschaftlichen Revolutionen. Fft. Am Main, Suhrkamp. S.20

<sup>19</sup> TIPPETT, Joanne: Teaching a Permaculture Design Course. In: GOLDRING Andrew (2000): Permaculture Teachers' Guide. Permaculture Association, London; p.29-31



### 3.. EXPLAINING

We want to explain for the city of Neusiedl am See the kind of living which means 2 or 1 t CO<sub>2</sub>/person by 2050 – Zurich 2000 Watt society<sup>20</sup> - (instead of 7 - 11 CO<sub>2</sub> t/per person/a) at the moment within industrial countries. Finally we will establish a set of indicators for a sustainable living in relation to CO<sub>2</sub> reduction and appropriate footprint standards.

We will ask the former director of the 'Biologische Station Neusiedl-ersee' Prof. Alois Herzig to explain the metabolism of an **ecosystem** we can show on a global level and the main drivers of the eco-system: the influence of the sun in relation to earth, **producing** with water and wind all living creatures (plants, trees, vegetables etc.), second: we are **consuming** all these living creatures (and partly destroying it). And finally soil is **reducing** our waste dump.

Understanding sustainable for nature and mankind means the bases of life, soil, water, air, energy and biodiversity, the living environment in urban and rural areas, food and quality of life. Especially the last one should correspond to the intrinsic values and goals of the national park. This means among other things explaining the tasks for the future to establish a set of indicators for a sustainable living in relation to CO<sub>2</sub> reduction and appropriate footprint standards.

### CONCLUSION, FOLLOW UP AND NEXT STEPS

Within our permaculture design course we will integrate several disciplines, including ecology, solidarity economy, geography, agriculture, architecture, spatial planning and ecological gardening, fostering multifunctional land-use and interlinkages to the regional development. What we can consider as **innovative** about permaculture is the conscious design and maintenance of integrated systems of food production, housing, renewable energy, radical technology and community development. We will **transfer the knowledge** of the permaculture design course to inform the people, administration, politicians etc. in Neusiedl am See, and also in the participating countries.

The 'EU Strategy for the Danube Region' is describing in the document 'action plan' concrete priorities for the macro-region. **The action plan** 'Protecting the Environment in the Danube Region and especially focusing on preserving biodiversity, landscapes and the quality of air and soils.

The **Action Plan** is one of the outputs of the 'EU Strategy for the Danube Region' approach.<sup>21</sup> Within priority area B6 (to preserve biodiversity, landscapes and the quality of air and soils. p.47) the **Academia Danubiana** is mentioned as an example of a **project**. *"To implement the strategy for soil protection" - Responsible, multifunctional use of land and soil and interlinkages to the regional development, as well as new governance tools and the "learning region" concept would be developed. The project should link to the work already undertaken by the Academia Danubiana<sup>22</sup> in this field.*

The action - "To raise awareness about soil protection" could be achieved in cooperation with the European Land and Soil Alliance (ELSA), including more than 100 members from 7 Member States (UK, NL, DE, CH, IT, AT, SK, some municipalities of the CZ). Further partnerships in the Danube Region should be initiated on communal level and in the educational domains.

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<sup>20</sup> Zurich towards '2000 Watt'. <http://www.stadt-zuerich.ch/2000watt>

<sup>21</sup> European Union **Strategy for the Danube Region**. {COM(2010) 715 final} [http://www.oerok.gv.at/fileadmin/Bilder/2.Reiter-Raum\\_u.\\_Region/4.Europ-Raumentwicklung/Makroregionen/EUSDR/Docs/2010-12\\_EUSDR\\_ActionPlan\\_EN.pdf](http://www.oerok.gv.at/fileadmin/Bilder/2.Reiter-Raum_u._Region/4.Europ-Raumentwicklung/Makroregionen/EUSDR/Docs/2010-12_EUSDR_ActionPlan_EN.pdf)

<sup>22</sup> **Academia Danubiana** ([www.academia-danubiana.net](http://www.academia-danubiana.net)) is an institution that focuses on a scientific and educational network of universities and other institutions of the Danube Region. (see Danube Strategy p.52)