

Sustainable City in Romania – from Vision to Reality

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Abstract

After the Conference for Environment in Stockholm in 1972 and after the release in the same year of the first report to the Club of Rome „The Limits to Growth“ (Meadows 1972) it was understood that besides wanted effects of the technological progress, undesired and negative effects can appear, not only because of developing, but also of using new technological applications. It was clear that the arisen environmental and social problems are very serious and need to be solved. After this time the environmental awareness began changing.

Worldwide began discussions on scientific, political and social levels in order to find solutions for the problems shown above, which could be applicable to several countries, with respect to regional differences. The concept of sustainable development, defined for the first time in the Brundtland Report (Brundtland 1987) was accepted as a possible solution for the global complex ecological, economical and social problems. This concept was very large discussed 1992 during the Conference for Environment and Development in Rio de Janeiro as well as stated in the closing document „Agenda 21“ (Tulbure 2003).

Many actions after this time emphasize that the evolution of technical, social and ecological systems has to be analysed in synergetic relation (Jischa 2005), in order to succeed the successful operationalisation of sustainable development on different levels, on global, national, regional as well as on a local level. The goal was and still is to find the best strategies for assuring the sustainability of our society, by taking into account the multitude of aspects related to the economic and social activities (Tulbure 2003, Parodi/Banse/Schaffer 2010).

At this point should be stated that assuring the sustainability of our human society means developing and applying proper sustainable development strategies on different levels, i.e. on national, regional as well as on local level. Gaining strategies on local level means actually developing strategies for the urban sustainability in cities. The vision of having in the future *sustainable cities*, by taking into account regional differences, is worldwide a pretty discussed topic, also in some Eastern European countries (Banse/Nelson/Parodi 2011, Tulbure 2011).

It was recognised that the urban sustainability is among the most critically important global issues of the 21st century. It is estimated that over 50% of the world's population now lives in urban areas. Some developed scenarios for the future urban development estimate that by 2050 the proportion of the global population living in cities will rise to 70% (Jischa 2005)

The big challenge is that cities now consume about 75% of all the world's energy and emit around 80% of all greenhouse gases (Jischa 2005). Therefore the fight against climate change will be won or lost in cities, so it is crucial that the urban habitats will become more efficient - not only for themselves, but for future generations and the earth's diverse ecosystems.

Several newly discussed strategies for sustainable urban development have at their base the concept of "Decoupling", that is a pretty recent term in the sustainability literature. It was mentioned by the Club of Rome, during its Conference "Governance of the Commons", that took place in September 2013 in Ottawa, Canada. This notion typically refers to the ability of breaking the long held causal relationship between economic growth and growth in the consumption of natural resources. The essence of decoupling means to assure a high quality of life for all citizens in the world, but without having a rasant growth in the energy consumption, with all its impacts on the environment, and not only. Decoupling goes beyond simple price adjustments or marginal policy shifts but strikes a blow at the heart of the fundamental yet mistaken belief that economic growth and natural resources use are two sides of the same coin, joined forever in a mutually reinforcing bind. Those you advocate decoupling believe that the binding knot can, and must, be broken. The ideas that underpin the concept of decoupling have recently become topical.

Another newly discussed strategy is based on the usage of bioenergies and biotechnologies (Jischa 2005), in order to establish future sustainable energy strategies for sustainable urban development. The bioenergy is a renewable energy made available from materials derived from biological sources, as biomass. Biotechnologies are such technologies that are using the combination of engineering processes with biological methods, based on microorganisms.

By using these two newer directions in a proper combination beside other strategies for the social side it would be possible to make important steps for assuring the urban sustainability.

Regarding the concrete situation in Romania, the question is nowadays how to transform a city in Romania in a regional model of sustainable development, in a sustainable city (City Council 2011). After joining the European Union in 2007, the word "sustainability" started to be heard more frequently in Romania. New opportunities for people to explore and learn from Western countries were suddenly opened. Small steps have been taken since then, sometimes because of bureaucracy, sometimes because of other priorities, and sometimes because of lack of knowledge and lack of financial resources. Nevertheless it has to be mentioned that in the last years some progress has been registered in the field of sustainable urban development.

In order to emphasise this development, the five biggest cities in Romania will be considered: Bucharest, Cluj-Napoca, Timisoara, Iasi and Constanta. In order to become sustainable cities, they all share some things in common: they want an urban regeneration, to reduce energy consumption and to use new transportation possibilities, other than cars (City Council 2011).

On the other side, the Romanian Government approved 2009 a program for the rehabilitation of residential urban buildings constructed from 1950–1990. And there are plenty of those. There were four major benefits from this action plan: increasing the energy efficiency of the buildings, changing the facades, protecting the environment by reducing emissions and reducing the amount of money spent by building owners.

Also the idea of constructing green buildings come very much into discussions, as for instance in Cluj-Napoca. This city has the first green school of Romania. Starting in 2013, the construction of green buildings has been encouraged by local authorities, for instance by reducing local taxes for them by 50%.

A lot of discussions are in the field of alternative transportation possibilities. The population in several cities did agree that bicycles will need to be used more frequently. The largest bike-sharing project in the country was launched 2010 in Bucharest, followed 2011 by Cluj-Napoca and Constanta and 2012 by Timisoara. Each city is hoping this will help reducing their carbon footprint and sustain the development of an adequate infrastructure for cyclists (City Council 2011).

The city Alba Iulia in Romania, having a number of inhabitants of 66,369 has a Development Strategy that aims to acknowledge the urban mechanisms as a positive force in improving the housing standards, the equity and sustainability standards. The strategic plan is to address issues related to improving the quality of pedestrian areas and all public space areas and also to improve the accessibility in the historical part of the city, this is the Fortress Area. The environmental policy of Alba Iulia is also targeting transport issues, as the tourism activities are pretty developed in this city (City Council 2011).

It should be mentioned that nowadays there is no agreement regarding a general definition for sustainable city or there is no complete agreement upon paradigm for what components should be included in this concept. Generally there is agreement that a sustainable city should meet the needs of the present without compromising the ability of future generations to meet their own needs. The ambiguity within this idea leads to a great deal of variation in terms of how cities carry out their attempts to become sustainable. However, a sustainable city should be able to feed itself with minimal reliance on the surrounding countryside, and power itself with renewable sources of energy.

Nowadays the goal is to generally promote the idea of achieving sustainable regions, not only sustainable cities, by taking into account all aspects related to this issue such as technical, economic, social and environmental aspects in the field of adequate living conditions and housing space, proper resource use, mobility, governance as well as social life. Connected to this idea, developing a kind of a "general methodology" to be applied into the practice for real concrete situations by taking into consideration regional differences would represent a major progress in this field, just to come from the vision of sustainable city to the reality.

To achieve this main goal of the present developments in the field of assuring a sustainable urban development it would be useful that Romanian cities will become partners in international networks of sustainable cities, just to learn about experiences of other cities in other countries and to cooperate in this field of sustainable urban development. On the other side the desire is to find appropriate ways to establish strategies for the sustainable urban development in Romania in order to get the general profile of a Romanian sustainable city.

References

- Banse, G., Nelson, G., Parodi, O. (Eds.), 2011: *Sustainable Development - The Cultural Perspective*. Edition Sigma, Berlin
- Brundtland, 1987: *Our Common Future, 1987 - The Brundtland Report to the World Commission on Environment and Development*. Oxford Univ. Press, Oxford.
- BUND/Misereor (Ed.), 1996: *Zukunftsfähiges Deutschland*, Birkhäuser, Basel.
- City Council, 2011: Sustainable Development Strategy of the Alba Region AIDA. Alba Region, Romania.
- Jischa, M. F, 2005.: *Herausforderung Zukunft*. Second edition, Elsevier, Spektrum Akademischer Verlag, Heidelberg.
- Meadows, D. and D., 1972: *The Limits to Growth*. Universe Book, New York
- Parodi, O., Banse, G., Schaffer, A. (Ed.), 2010: *Wechselspiele: Kultur und Nachhaltigkeit. Annäherungen an ein Spannungsfeld*. Edition Sigma, Berlin.
- Tulbure, I., 2003: *Integrative Modellierung zur Beschreibung von Transformationsprozessen*. Habilitationsschrift, TU Clausthal. VDI-Fortschrittsberichte, Reihe 16, Nr. 154, VDI-Verlag, Düsseldorf.
- Tulbure, I., 2011: *Considerations regarding Cultural Differences when Operationalising Sustainability on Regional Level*. In: Banse, G., Nelson, G., Parodi, O. (Eds.): *Sustainable Development - The Cultural Perspective*. Edition Sigma, Berlin.