PROSPECTS OF AN ECO-CITY DEVELOPMENT IN THE CENTRAL AND EASTERN EUROPEAN URBAN AREAS

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INTRODUCTION

The paper[1] discusses some definitions and aspects of sustainability. Eco-cities are classified within the different sustainable settlement developments. In the second part special circumstances in Eastern and Central Europe are described. The specialities in the transition countries are classified as development gap, democracy gap and historical/geographical specialities. Finally sustainable settlement efforts in Hungary are shown.

SUSTAINABILITY

While Eco-City is not identical to Sustainable City, still the proper understanding of the term 'sustainability' is of cardinal importance in this whole topic.

Susan Murcott (1997) collected 57 different definitions of sustainability published between 1979 and 1997, together with different sets of principles and criteria.

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It can't be our task here quote, group or compare these definitions (or others born since) but it seems to be important to distinguish two divergent approaches. Several definitions limited the criteria of sustainability on maintaining ecosystems and natural resources, while others spoke about social, economic and ecological issues, well-being, equity, productivity, cultural and spiritual needs. Is it possible, that sustainability, or even „sustainable development" can be understand and interpreted in such wide scale of meanings – or there exist more sustainabilities and the authors spoke about different phenomena? We decided the latter and here we try to distinguish two important approaches of sustainability, before using further that term in the context of the settlements.

External sustainability

There is always *something* we want to sustain. That entity can be an activity, an institution, economic transactions or, in this paper mainly a settlement – but all these entities can be considered as *operating systems*. It is that system, and the operability of that system that we want to sustain.

Traditionally in systems approach the analysed system is frequently considered as black box. This means, that we do not want to deal with the specific internal operation of the system – be that an industrial production or cultural life – but we concentrate on the connections, the way, that the whole system is connected to its outer environment. These connections are the material or other *input* and *output* relations of the system.

If we want to define the conditions of the durable operation of the given system from the point of view of the outer environment, we can deal but with those parts of the system-operation that is visible from the point of view of the outer system: and this is not more, than the *input and output flows* to and from the black box. So from this perspective the only possible condition of the sustainability of the system is, that the outer environment be able to supply the system permanently with the inputs it needs and also be able to accept permanently the outputs arriving from the system.

This is the perspective from where we interpret the *external sustainability* of a system: that is, counting but with all those activities, that can be done for the operation of the system *from outside*. If the environment is able to offer unlimited the needed conditions (as the nature was considered for ages) then there is no outer barrier for the sustainability of the system. We know, that the situation is different, the *environment* is another system, and from its part it is *not* able to feed and absorb all of our human-made system's needs without limits. It is not a real possibility to change the natural environment in order to be able to fulfil more needs – so it is the human system that can adapt itself to the endowments of the natural environment.

The criteria for the *external sustainability* can tell us, what are these conditions: namely **(1) the rate of the use of resources (materials and energy) can not be greater than the rate of regeneration; and (2) the rate of emission can not be greater than the rate at with the pollutants can be absorbed**. These two criteria are *sufficient* for the external sustainability – there is some room for fining debates if it is also *necessary* or too strict.

Sometimes a third criterion is added, by that (3) the rate of use of *non-renewable resources* have to be limited so, that its pace can not be greater, than the rate at which that resource can be substituted by renewable sources. This criterion brings in to the debate two new points. The first one is the possibility of the substitutability. (That can only be understood as substitutability for a *special human use*: and by that point for example the horses could be substituted by motorcars. It is very clear, that this possibility can not mean that the extinction of the horses would be part of the sustainability.) The other point is that this third criterion relates not to sustainability, but rather to the way *how* we can get from a present operation to a sustainable one. This is really a difficult question have to deal with, – but not part of the criteria of the external sustainability.

Internal conditions of sustainability

The sustainability criteria for a system can be very simple and easily understandable – but it has no connection with the possibilities, whether it is achievable or not and how.

Let's take the *population growth* as an example. The external criteria for the stable population are clear and easy to acknowledge: the birth rate must be more-or-less the same, as the death rate. In the same time *within the system*, that is in the everyday life of the population this criteria has no meaning: when a family decide about the number of children they are influenced by many impacts: family tradition, religion, neighbourhood habits, economic pression, incidental effects etc. all these are totally different from the simple external mathematical criterion. Still the external criterion is correct, still the aim has to be to achieve some stability – but the path to that does not go through teaching people about the birth rate and about its importance – but instead, by creating incentives that can effect people in the family or generally in their life so, that their decisions get closer to a globally expected rate.

The case is similar with *sustainability*. The external criteria are simple and understandable: even their meaning seems to be closer to the thinking of people within the systems (relative to the above population case) as the use of renewable resources *has* meaning and sense within a sector, within a factory or within a settlement too. Still it must be clear, that understanding a limit, even understanding it with accordance does not mean, that the operation of the system can change so, that the under-

stood criteria should be better fulfilled. The new condition will be added to many other conditions (and emotions, interests, habits, pressions etc.) on actors and not necessarily able to change the internal operation of the system so, that the result fit better to the external constraint. Those conditions that could assure, that the internal operation of the system be able to change toward a more sustainable operation mode (that is to fit better to the external sustainability criteria) are part of the *internal conditions of sustainability*. More exactly, here also making a difference between the *change toward* a more sustainable operation and a *sustainable operation*, we must say, that it is the *internal conditions of sustainability* that can keep a system operating sustainable on that sustainable path.

Those further definition elements, out of the above mentioned two external sustainability criteria are part of the *internal conditions of the sustainability*. That is, while the task is not more, than fulfil the external criteria of the sustainability, it is an experience, that there are different internal conditions within a system, that are indispensable for assuring that the operation of the system be able to change so, that it could respect the external conditions. We can speak about a few general internal criteria of sustainability, and naturally, from the point of view of the internal operation of the system there are huge differences between operational modes, and here already there is a difference whether we speak about a factory, about an economic branch or about a local community. So here it seems better to focus less extent to the general internal sustainability conditions, but rather look at the internal conditions of the sustainability of the settlements.

A good transition between the two if we see the „necessary conditions for global sustainability" set up by Rees (1995). His own grouping is different from ours as he distinguishes 3-3 *ecological stability requirements* and *geo-political security requirements*. The two first ecological stability requirements are identical to those we called external criteria, while the third one already relates to the internal activity: *–economic activity protect the essential life-support functions of the ecosphere, and preserve the biodiversity and resilience of the Earth's ecological systems*. Similarly, all three geo-political security requirements are also objectives that the internal system has to achieve: *–society satisfy basic standard of material equity and social justice*; *–governance mechanisms be in place to enable an informed citizenry to have an effective participatory role in decision-making*; and *–people share a positive sense of community cohesion (local and global) and a sense of collective responsibility for the future*.

Looking these requirements or turning back to the series of definitions of sustainability collected by Susan Murcott (1997) we can state, that (out of the mentioned two external sustainability criteria), the other points are *goals and objectives* rather than really criteria. While on one side it is no question that all the mentioned goals (preserving biodiversity, material equity, social justice, good governance, informed citizen, participation in decision-making, community cohesion identity etc.)

seem important for a sustainable operation, still on the other side we tend to feel a kind of uncertainty after reading such lists: why just these conditions were enumerated, whether we could add another element to the list, or is there anything that is not necessary? A systemic approach is missing.

Integration of fragmented subsystems

Looking over the settlement centred literature dealing with the sustainability issue, there is a usual approach, that authors frequently don't analyse the operation of the internal system, but still call it *system* and divide it to more (generally three) subsystems. Then the description handle them as sets rather than systems, (while calling them subsystems) and looking for the interaction subsets of the overlapping boxes.

A comprehensive survey of the *integration of internal subsystems* is given by Camagni et al (1998) where the *triangle* consists of three subsystems: the *economic* one, the *environmental* one and the *social* one. The main argument is, that all these systems dispose with main ruling principles, as profitability/economic-growth, ecology/aesthetics and pure-equity/welfare respectively, but neither of these principles are able to assure sustainability in their pure form, only their integration able to do that. The overlapping field between the environmental and the social sets gives the *environmental equity* subset (intra- and intergenerational equity). Similarly, between the environment and the economy there is a subset called the *long-term allocative efficiency*, as „[p]ure short-term profitability principles should evolve into a long-term allocative efficiency through the internalisation of negative externalities" (Camagni et al 1998 p108); while between the economic and the social spheres the *distributive efficiency* principle was formulated unifying the profitability and the pure equity earlier principles. The authors underline that the interaction between the subsystems may bring both positive and negative externalies, and „[a] sustainable city is… …a city where the three environments characterising an urban agglomeration interact in such a way that the sum of all positive externalities stemming from the interaction of the three environments is larger than the sum of the negative external effects caused by the interaction." (Camagni et al 1998 p108).

Interactions between environment, economy and society is also used as a starting point by Ravetz (2000), who analyse the flows appearing in new post-industrial globalised city-region relations. – Based on the same corners, Castells M (2000) integrates differently these components into sustainability. For him the complex phenomenon of sustainability has three *dimensions*: and these are the economic sustainability, the social sustainability and the ecological sustainability. Castells uses those dimensions to explain what to do for sustainability in the different fields, but he doesn't declare, that sustainability would be deduced from those dimensions.

While there is no debate on the fact that the sustainable city *must integrate the operation of its subsystem*s, it is not so evident, that which subsystems are to be in-

volved into the model. Moomaw W R (1996) uses the same triangle, but with different subsystems: „culture, economy and environment [are] three corners of a sustainability triangle that encloses well-being." (Moomaw 1996 p.426). So here *well-being* is the goal, the reason of the whole integration – while above well-being – or at least welfare – seemed to be a particular principle of the social subsystem. Another focus is given by Hancock T (1996) to whom, due to his topic, the centre of the triangle is *health*, the three corners of the triangle are *economy*, *environment* and *community*: and for him *sustainability* is just an overlapping subset of environment and economy, – while the subset between economy and community is *equity*, and the overlapping part of environment and community is *liveability*. Gibbs (1997) introduces in his article an approach, where "sustainability rests on four pillars: ecology, economy, *democracy* and *community*"

Studying these different approaches above, our conclusion is, that the triangle, as a formal tool can be a good metaphor, and a useful instrument to explain the necessity of the integration of different principles of separate disciplines, but, in the same time it seems not to be satisfactory for selecting the basic components of the internal sustainability criteria of a settlement.

The urban metabolism

As there is a good agreement in accepting the external sustainability criteria, it seems logical, that a systemic internal approach should be connected to that input and output flows. Such approach concentrate on the material flows goes through the city physically (throughput). Herbert Girardet (1992) in his Gaia-book distinguishes the *linear metabolism* of cities („A city with linear metabolism takes what it needs from a vast area, with no thought for the consequences, and throws away the remains. Input is unrelated to output." Girardet 1992 p.23.) from the *circular metabolism*. („In a city with a circular metabolism every output can also be used as an input into the production system..." Girardet 1992 p.23.). The idea is very round and suitable for serving as a general idea to organise the industrial, household, trade, waste etc. flows in a city or in a region.

Herman Daly (2002) suggests to use even more basically the throughput-centred approach. There are two main possibilities, he says, what we may want in a system to sustain. One is the *utility* of the operation; the other is the *throughput* flow. Generally the definitions and theories tend to aim at maintaining the utility, while it is non-measurable and something that can't be bequeath to the future. Still economists use utility and try to measure it with the market price. In the same time economy doesn't use the throughput As Daly points out, throughput-centred thinking should be the common element that would be able to create the common language in economics and in the sustainability issue.

In the same time Daly underlines that it is an illusion, that a city or even a region could be based on exclusively circular metabolisms. „Economists are very fond of the circular flow vision of the economy, inspired by the circulation of blood… … Somehow the digestive tract has been less inspirational to economists than the circulatory system. An animal with a circulatory system, but no digestive tract, could it exist, would be a perpetual motion machine." (Daly 2002 p.2.). So also for cities, it is important to make an effort to introduce as many circular metabolism, as only possible, but we have to accept, also, that there always rest some room for linear metabolism.

It is even more so if we consider a city without its region. A city is by definition an artifact environment (Camagni 1998 p. 105) and an absolute priority to the natural environment would cancel cities generally. (This consideration leads us back to the importance of the integrated approach of social, economic and environmental principles).

Development and internal integrity

While the metabolism approach helps us to deal with the everyday flows of the operation, our systems also have to face up to the fact that whole system-structures can change in time too. „[S]ustainability for cities should be not simply the conservation or the preservation of the conditions of the reproduction of what it is, but an expanded reproduction… …new aspirations and corrections of illnesses of cities as they are today." (Castells 2000 p.119). While sustainability definitions generally deal with the time dimension of the changes („for the future generations") dealing with cities or regions it is important to underline, that the sustainability have to dispose with the same relation in space to. For Castells the sustainability is not only *control over time* (intergenerational solidarity) but also *control over space*. This aspect has a close contact with the locality / globality problem, as the control over space means, that „a space where people organise their lives, may retain its autonomy and its meaning independently from the evolution and dynamics of the space of flows, where most dominant functions and power are organised… so it is the defence of the place versus the flows, not necessarily to eliminate the space of flows or to eliminate its function…" (Castells 2000 p.118)

Another aspect of the same phenomenon is touched by Carroll – Stanfield (2001) when dealing with sustainable regional economic development. This paper points up the importance of the pace of the changes relative to the ability of local structures to adapt to these changes. „...an integral part of sustainability is the maintenance of relative consistency in the cultural and institutional structure. This does not mean that the region's socio-economic structure cannot evolve over time; social entities certainly do evolve and transform. What it does mean is that this change cannot be so rapid that individuals within the system are left without norms or values that define their existence." (Carroll – Stanfield 2001 p.470).

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As for the internal conditions of sustainability, there is a tendency in the literature to collect many positive, desirable even tempting features, and identify them with „sustainability" There are important attempts to arrange all the characteristics into logical order, and there are other initiatives to start from a systemic approach and select by that way the key characteristics. At the moment this theoretical background-work does not seem to settle down or to be finished. Let's summarise the scale of touched issues following the classification of Marina Alberti (1996). She distinguishes three groups of urban sustainability dimensions: (1) *urban flows*, as energy, water, materials; adding here also information and technologies; (2) *urban quality* as environmental quality, human health, efficiency, equity, diversity/flexibility, accessibility, and learning; and (3) *urban patterns* enumerated here functions, (sectors) structures (form, density, inhomogenity, connection) and community (population, economy, society). We can see again that the classification is quite arbitrary, but the items cover more-or less those appeared in the metabolism, in the subsystem-set and in other approaches above.

These are the items somehow touched in the sustainability dialogue. *Our expectation is that these items are still waiting for getting a more consistent organising principle within the umbrella of the internal sustainability.*

ECO-CITIES WITHIN THE DIFFERENT SUSTAINABLE SETTLEMENT DEVELOPMENTS

Within the more general approach of sustainable settlements, or sustainable urban settlements, slowly we should approach to the *eco-cities*.

While there are no strict and consequent limits between different groups, approaches and definitions in this respect, still we can come closer to this topic in two ways. The first possibility that we describe the activity of those groups who *define themselves* dealing with eco-cities; and the other one that from the more wide literature we try to *adapt existing classifications*.

The activist's self-definition on eco-cities

Following the first line, the Eco-city denomination origins from the mid-seventies, when Richard Register and a few friends founded Urban Ecology, a civil organisation, and began to call that kind of urban reconstruction „in balance with nature" that they aimed at achieve, as eco-city. The international reputation of the expression started from 1990 when the same group organised the First International Eco-city Conference in Berkeley, with several hundreds of papers and speakers. Since in almost all even years there were similar conferences in Australia, Africa, South-America, while the next fifth conference will be in China August 19-23, 2002

By the call for paper for this conference, „Eco-city is a living whole system, a natural and human-made unity having economically productive and ecologically efficient industry, systematically responsible and socially harmonious culture, and physically beautiful and functionally vivid landscape. …" (The Fifth 2002)

The founder classified and published the Eco-city principles in four groups (Register 1985). These principles are: (1) small scale – highly qualified, (2) access by proximity, (3) small-scale recentralisation and (4) diversity is healthy. While these principles cover material flow minimalisation, mobility, city structure, and diversity, there is no sharp or determining difference between these principles and the above surveyed more general sustainable settlement principles. (Not overlooking the fact that publishing them in the mid 80s they differed much more from the generally accepted ambitions than do it now).

A similar statement can be made if we overlook a wider list of ten principles, given by Urban Ecology, the core-organisation of the movement in 1996 (reported by Roseland 1997) /Extracted by us/ (1) compact, diverse, mixed-use, (2) access-by-proximity, (3) restore damaged urban environment, (4) convenient... mixed housing, (5) social and minority justice, (6) greening and gardening, (7) reducing-recycling, (8) ecologically sound business activity, (9) discourage excessive consumption, (10) increase awareness of local environment

Eco-cities in existing classifications

Mark Roseland exploring the evolution of the concept of the eco-city finds that sustainable settlements are only one of the roots of the movement. The others are appropriate technology, community-economic-development, social ecology, green movement and bioregionalism (Roseland 1997). All these roots have their own philosophy, in the same time Roseland states his point: „It is at present safe to say that there is no single accepted definition of 'eco-cities' or 'sustainable communities'." (Roseland 1997 p.201)

In the same time Roseland classifies the different existing movements creating four groups. (Designers, Practitioners, Visionaries and Activists). Using this classification we arrange the groups here by two scales. The vertical axe adapt Roseland's main distinction *from theories to practice*, while it seems useful to introduce another scale horizontally to arrange the activities *from those counting with the present situation to those targeting revolutionary new solutions*.

	Status quo based	**Future condition based** (clear page – new ideas)
Theory-based	Designers	Visionaries
Practice-based	Practitioners	Activists

Table 1. Typical approaches in the urban sustainability literature – based on Roseland's analysis (Roseland 1997)

	Status quo based	**Future condition based** (clear page – new ideas)
Theory-based	The cost of sprawl Sustainability by design	Sustainable communities Community self-reliance
Practice-based	Sustainable urban development Sustainable cities Local sustainability initiatives	Green cities **Eco-cities** Ecocommunities

Table 2. Positioning eco-cities into Table 1 – using up Roseland's categorisation (Roseland 1997)

Using this scales and accepting Roseland's classification enclosing eco-cities into the Activists group, we can define **eco-city movement** as one among those, that **aim at achieving a new, consistent urban solution, while they try also implement this solution into the practice**.

Starting from these two dimensions a few other facts follow. Eco-city relates to relative small, limited areas within the urban texture (otherwise there would be no hope to implement the conception), while on the other side it aims at complex, holistic solutions in the selected area. (Otherwise it wouldn't fit to the ideal operation notion).

Consequently *sectorially partial solutions*, that try to organise the sustainable operation of the city in one single sector (selected waste management, calmed traffic, energy efficient buildings etc.) are *not* eco-city movements in themselves, even if they can give important input to eco-cities. The eco-city movement is always involves a life-style commitment and a community element for those taking part in it.

Changing urban centres / whole regions to sustainable operating unites is evidently a very slow and gradual process (even if we know, that there is no time and it

would be urgent). There are different partial approaches, the earlier ones were limited to the *protection of the elements* of the already polluted / degraded environment (end-of-pipe solutions). A more recent approach *integrates the environmental principles into the different economic activities*, sectors, here trying to prevent the formation of those most environment-polluting actions. The eco-city movement forms another way and in a *spatially limited area* try to create a liveable, and in each element sustainable urban (or rural) life possibility.

SPECIAL CIRCUMSTANCES IN EASTERN AND CENTRAL EUROPE

During those years when the eco-city movements started in the mid 70s – or more widely, when the environmental concern became a topic for a general public in industrial countries – the countries now called Eastern and Central European countries or transition countries were living in centrally planned economies within or out but effected by the Soviet Union. While in western societies civil movements played a crucial role in bringing the environmental issue into the public debate, even if it conflicted with the interests of the main production centres, in the centrally planned countries there were no civil movements, only centrally organised formal and hierarchical "movements" controlled by the same political centre, that controlled also the economy. The omnipotent single party was on the top of the power hierarchy, and was very sensitive to prevent every local or independent opinion not speaking about movements, as the party being omnipotent every opinion differences could lead back to political level, but the politics was the privilege of the one party.

Still, from the early 80s while the political pluralism was still taboo, the environmental alternative views could slowly achieve a semi-legal status; at least the same people who did not express publicly their political opposition, found that to join to the environmental movement was somehow more tolerated. In the late 80s the environmental movements have grown very big, and both for the western public, and within the countries it seemed so, that in the centrally planned economies there are exceptionally environment conscious wide crowds. There was an illusion that all those promotions that went very slowly in the western societies could be easily introduced in the eastern part of Europe.

Very soon with the transition it became clear, that these were illusions. There was already a possibility to create parties, and all those people used the environmental movements to express their political opposition joined rather to parties. In the past decade there proceeded a marketisation of the economy, that resembled sometimes better to the 19th century early forms of capitalism than to the contemporary one.

Within the cities these processes were also dominant. The income differences have grown up, there appeared the unemployment (although not firstly in urban ar-

eas) and other consequences as homelessness, urban segregation, increasing suburbanisation, failure of the big industry, abandonment of factory buildings, parallel with building over the green areas. The state-owned residences were mainly privatised without providing for the conditions of rehabilitation of their poor state. The motorization and the aggressive satisfying of the short-term motorised needs proceeded. The big shopping centres has changed the trade structure, many investments promoted an edge-city development.

All these changes were very rapid, absolutely contradictory with the declared environmental principles, but still always promised short-term advantages or involved the influential circles of the society, so it seems that it was not against the people's ambition.

People in the centrally planned economies have heard frequently, that the difficulties have to be considered as sacrifice for a better future (that was scientifically planned). The better future never arrived, and by now people lost their confidence in any short-term sacrifice. Corruption, low political and business moral also teach people, that while they give up something, others use it up: so the action didn't serve the future but rather other people's richness.

Camagni et al (1998) in the paper quoted above refers to the empirical function between the per capita income changes and the environmental capita changes. In very poor countries (pre-industrial phase) and also in most developed post-industrial societies the growth in income brings also an improvement in environmental quality (because of different reason). In between the two, that is in the industrial phase the case is different: while the per capita income increases, the environmental quality goes down. The transition countries in general didn't come yet out from that development phase, and now they living over a very frustrating situation. The EU legislation was prepared and adjusted for the Western European problem level. The harmonisation of the legislation presses the transition countries to prepare their regulation for the same level – and in the same time there is another pression (sometimes by corporations arrived from an EU country) to make possible those investments, that result all those consequences enumerated above as the experience of the past decade.

Classification of specialities in the transition countries

It is worthy to distinguish three types of specialities, as their effects and their relation to changes in time can be different.

"Development" gap

There is a "development" gap measured in GDP per capita terms between the eastern and western part of Europe. From this point the problems are similar to those

other countries sharing the same income level. In the western countries in the post-industrial phase there is a positive take-off between the income growth and the environmental quality growth – while in the industrial countries this take-off is negative (see above). The adaptation of the post-industrial regulatory mechanisms is not enough to solve these problems: it is necessary to work out special regulation using the accepted principles and objectives, but adapting the *mechanisms* to the industrial situation.

"Democracy" gap

This group of the differences origin in the forty years of one-party system and of centrally planned economy socialisation of the transition countries. While the development gap problems are similar in a South American and an Eastern European country, this latter is a specificity of the region. Here one of the key problems is that these countries have to adapt themselves to the market economy/political democracy and to the post-industrial expectations in the same time. Both (or all the three) adaptations could wear out the social structures, but the superposition of them cause unique and sometimes irreversible breaking in the structure. In the same time a sustainable settlement or an eco-city development suppose an operating and co-operating social background, communities are in the centre of the expected development.

We can quote here Tassilo Herrschel, who also underlines the importance of learning and accepting the special background of the transition countries. "[A] more sensitive interpretation and understanding is required of the particularities and uniqueness of postsocialism as a societal-economic condition in its own right, and the concept of the environment within that." (Herrschel 2001)

Historical/geographical specialities

Theoretically there is a room for a third type of difference. The urban structures and the social structures change very slowly, sometimes having a very long-period memory. So it is possible, that out of the economic and the political/geopolitical gaps mentioned, there are other cultural effects that go back to earlier historical periods. The area of Central Europe was always a kind of buffer zone between western empires / western cultural effects and eastern ones. There are many signals, as religion borders, historical style diffusion limits etc (of which the iron curtain was only one last – before the Schengen border). The historical differences influenced also the evolution of the urban settlements since the middle ages, and the role of the urban residents within the life of the countries. Although we are not ready to say which effects are transmitted from the historical past that may influence the formulation of the urban sustainable development, we mentioned this aspect as a possible difference from Western European practice, that worth further analysing.

EU based processes for sustainable settlement development in CEE countries

We mention here the series of the Pan-European Conferences on Sustainable Cities. (See EU Sustainable Cities Project) The main objectives are summarised among other by Csagoly (1999). On the second one from this series in Lisbon 1996 a decision was hold to organise four regional conferences in 1998-99 to understand better the specific urban problems of the north, south, east and west European regions. Partly the northern (Baltic) one and mainly the eastern one in Sofia touched the problems of our region.

The Sofia conference, entitled Towards Local Sustainability in Central and Eastern Europe, attracted some 280 municipal representatives and environmental experts from 70 cities and 30 countries. Objectives were two-fold. The first was to look at current local sustainable development initiatives and stimulate new ones in the CEE region. The second was to raise awareness of the local implications of EU accession and EU funding opportunities. (Csagoly 1999).

All four conferences culminated in conference statements. Unfortunately there was more emphasis on adopting a common declaration than reveal the specific situation of the region and the declarations became totally general documents without any relevance for example to our specific topic of eco-cities in Eastern Europe.

While the objectives formulated are too general to indicate or initiate realistic and suitable local targets, on the other hand local authorities do not feel they are in lack of perspective targets, they feel rather they are in lack of money. Löffler and Payne (2000) summarised the report made by the Office of the European Sustainable Cities and Towns Campaign following the Sofia conference where they classified the needs of the local authorities by priority. "The study rank money as first on the 'wish-list for sustainable development'… …Second place is occupied by the desire to have a higher degree of local selfgovernance accompanied by more financial autonomy… …Third, the report identifies disappointment from CEE cities and towns about the lack of support provided by their own national governments." In our understanding this means that local authorities rank also money on the second and the third place too, as 'financial autonomy' and 'support from the government' are nothing but polite expressions of more money needs in that context. It would be interesting to analyse, what organisations are behind that process from the side of the EU that help to declare, that the first, second and third most important obstacles hindering a more sustainable development of the Central and Eastern European cities are money money and money – perhaps there is an interest behind not just *give* that money but also *get* it? Anyhow, it is a question whether really possible buy sustainability for money. All our studies tried to prove that the answer is negative.

SUSTAINABLE SETTLEMENT EFFORTS IN HUNGARY

Surveying the Hungarian experience here we should focus first of all on attempts and cases that strictly fit to our eco-city definition, namely that "aims at achieving a new, consistent urban solution, while tries also implement this solution into the practice". Within that narrow frames we should constate, that there was no activity made in Hungary that would fits to all aspects of that definition.

Naturally it is not necessary insisting strictly on a definition created by us and not accepted by anybody else. We can keep the essence of the approach, but not within the urban texture. In that case the bioregions, eco-villages, eco-regions are also get into the picture. Szántó Katalin (2002) gives a good survey on the Hungarian 'sustainable region' initiatives and we can use here her classification.

Eco-villages, bioregions

A bioregion is a small-scale natural unit, as a basin or a watershed that can be the base of environment conscious and sustainable management. Béla Borsos adapted and developed the relating conception, and in the same time he was one of those few people who also moved to an earlier depopulated village, Gyűrűfű in South-Hungary in the early 90s. (Borsos 1994). This life-style model otherwise fits to full extent to the definition, as tried to make possible living in such a way, that the members could control all those metabolisms that they use as throughput.

There are several other sustainable village project in Hungary, not so laboratory ones (that is not depopulated-village based cases), and here naturally the objectives of the development has to be decided together with those living in the area. The Autonomous Local Region Project organised by the Independent Ecological Centre (Ertsey 1999) surveyed the Dörögdi-medence in Western-Hungary, where there are five small villages. The project outlined three different social-economic-ecological scenarios for the future, and more detailed analysis was made for the most important metabolisms as the energy circles and the water circles.

Another project in Eastern Hungary called "Gömörszőlős the sustainable village" (Ökológiai Intézet 2001) Here a Miskolc-based private institute works in a small model farm with the intention to create a model that is followable for the local residents, and gives a perspective also for other similar villages. The village itself has about a hundred inhabitants, mainly aged people, and so another interesting aim of the project to assure an immigration by making the activities of the village attractive.

Eco-regions

The expression 'eco-region' is also popular in Hungary. The biggest eco-region in this context is the complete Carpatian basin that contains the whole Hungary in the middle. The harmonious and concerted management of the Carpatian eco-region is

an important objective of all Hungarian governments, as the country itself is exposed to any ecological changes that occurs in the edge area – but this topic leads too far from the eco-cities.

There are also environment-friendly local regional development projects within Hungary that are called eco-regions: especially two resort area projects, the Ráckeve-Soroksári Duna-ág Eco-region south to Budapest and the Tisza-tó eco-region on the eastern side. Other eco-regions were organised near Zalaegerszeg, Kiskunhalas, Kalocsa, and one in Somogy county. In the Great Lowland there are also more eco-regions organised. Here the meaning of the eco-region is an environmentally prioritised project, used for managing a limited zone as a sensitive area.

Cities

The Independent Ecological Centre initiated another project, a Community Environmental Action Project in 1992-1993. together with the Institute for Sustainable Communities Montpelier, Vermont. The purpose of the 18-month Hungarian Community Action project was to demonstrate how local governments in Hungary can set environmental priorities, develop action plans, and implement cost-effective strategies to address the most serious problems in the community through a participatory planning and decision-making process. The project covered two demonstration communities: Mosonmagyaróvár (population 35,000) and Sátoraljaújhely (population 25,000). The training focused on comparative risk analysis, public participation, action plan development, environmental education, and leadership skills. The project resulted in the first curbside recycling program in Hungary (Sátoraljaújhely) and a river protection program (Mosonmagyaróvár).) In 1994-95, IEC replicated the project in Szentendre and Baja, and has conducted trainings for representatives of 15 other communities on how to implement a community action project. (IEC 1993).

While these programs attach great importance to the extended local participation, on the other side they are typically focused on the selection of the main problem and its whole-cycle, but still sector based solution. This is not a criticism, just a fact, that shows, that in cities with 25-35 000 population these projects tightened their focus by topic and not by territory, and in this respect they differ from the eco-city approach.

Another project dealt with sustainable cities was co-ordinated by Regional Environmental Centre, Szentendre. This project focused rather on conceptions, as defining the sustainable cities, – so it does not fit to the practical and complex expectations of the eco-cities. (REC website) Still it is interesting to quote those part of the results, how REC for central and Eastern Europe summarised the barriers to be overcoming for achieving a sustainable settlement.

“The main barrier is that environmental issues are still considered to be of secondary importance after economic progress. Many Central and Eastern European

cities follow the Western example: first economic development, then environmental remediation…even though it is already known that environmental considerations do not necessarily threaten economic development. In fact they push the economy towards higher efficiency and urge the formation of knowledge based societies.

The complex interactions between the natural environment/economy/society are not sufficiently considered. Usually isolated problems are addressed. Decision makers tend to look at the costs of urban sustainability, and place less emphasis on the benefits. The notion of environment vs. economy is still prevailent. Even though lots of examples show that eco-efficiency can bring real savings through more efficient production practices. It is extremely hard to break out from a consumer society and give up wasteful habits. People strongly resist changing their lifestyles. (E.g. drive less, purchase environmentally conscious goods, collect waste separately, become more active members of civil society/be less passive, become more responsible ("just not in my backyard…") etc.) Business lobbies of energy/material intensive or environmentally controversial industries are still very strong. (E.g. oil industry, car manufacturers, power generators, tobacco industry, chemical industry, throw-away product producers etc.) A weak democratic system increases the power of various interest groups. Big social problems may hinder law enforcement, co-operation in problem solving, acceptance of environmental principles, long-term planning etc.“(REC website)

MAIN CONCLUSIONS

The eco-city movements constitute a special segment of the sustainable settlement aspirations. Using the classification of Mark Roseland, this paper constated that the eco-city movement aims at achieving a *new, consistent urban solution*, while tries also *implement this solution into the practice*. The movement itself can lead back to the 70s Berkeley, California, and since 1990 international conference series help that those follow that approach could exchange their experience internationally.

As eco-city models make effort to create complex and comprehensive solutions, their approach always amalgamate the social (community, cultural), the economic and the ecological dimensions. The requirement of implementing the solutions into the practice demand that the scale should be manageable, people-centred and also that participants handle it as their own objective. All these conditions make the eco-city initiatives a kind of territorially limited sustainability experiment.

In Eastern and Central Europe the last decade transition period brought huge an rapid social changes, where the post-industrial views and pressions are mixing with a learning process of co-laboration with the newly experienced market-economy. While there were illusions about the enviroment-consciousnes of the transition

countries society, this expectation failed and the dominating trajectories lead toward the adoption of the western path with all their mistakes.

Within these circumstances social life-style experiments like the eco-city movement enjoy relative small support, there are very few followers and also relatively few people who listen these experiments with interest. Within the environmental projects (as same as within other projects) the sectorial division is more frequent. Still there are several movements, their scale is eco-village rather than eco-city.

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