

URBAN, ARCHITECTURAL AND TECHNICAL ASPECTS OF THE RENEWAL OF THE COUNTRYSIDE VI.

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Faculty of Civil Engineering,
Radlinského 11, Bratislava

CHALLENGES OF SOIL AND LAND IN THE CENTROPE REGION

Werner Kvarda

WHAT ARE THE PROBLEMS ?

Space is an asset that is extremely limited and cannot be reproduced, and which has always been the subject of strong conflicts with regard to its utilisation. European soils are under pressure by non-sustainable land use practices. Understanding the varying properties of the soil (and water) systems in space and time that determine the opportunities for more eco-efficient land uses is essential for future integrated resource management policies.

At an accelerating rate we are destroying and sealing nature and converting areas to fields, settlements and traffic areas. Soil is a limited resource and is under severe pressure. Soils are carried away by water and wind erosion in finest arable lands at rates between 10 and 40 times the rates of soil formation. Very recently (2005) Jared M. Diamond was writing a book called "*Collapse: How Societies Choose to Fail or Succeed*", intending for his readers, that its readers should learn from history. Jared Diamond show us on an epic journey around the globe, through history of humanity why several civilizations like the Easter Islanders, Classic Maya and other past societies collapsed. This book employs the comparative method to understand societal collapses to which environmental problems contribute. Diamond lists eight factors which have historically contributed to the collapse of past societies: Deforestation and habitat destruction, Soil problems (erosion, salinization, and soil fertility losses), Water management problems, Over-hunting, Over-fishing, Effects of introduced species on native species, Human population growth, increased per-capita impact of people. Further he says four new factors may contribute to the weakening and collapse of present and future societies: Human-caused climate change, build up of toxic chemicals in the environment, Energy shortages, Full human utilization of the Earth's photosynthetic capacity.

The trend towards uncontrolled sealed surfaces and damage of an asset that is extremely short and cannot be reproduced is continuing. The targeted reduction in the growth rate of permanently sealed surfaces is to be achieved by looking for concrete measures and solutions. Thus we have the opportunity to learn from the mistakes of distant peoples and foster counter measures. Our common soils are 'per excellence' very important for sustainable development, ever since the World Summit for Environment and Development in Rio de Janeiro in 1992, where Agenda 21 was adopted and the Framework Convention on Climate Change was signed.

UNDERSTANDING SOIL AND LANDUSE SYSTEMS

The UN proclaims with the Decade for Education for sustainable Development from 2005 to 2014 that education will help to develop widespread understanding of the interdependence and fragility of planetary life support systems. The general aims of the basic program ÖKOLOG from the Austrian Federal Ministry for Education Science and Culture (BMBWK) in Vienna are, to improve the quality of environmental education, to involve the students

actively for ecological awareness. Austria has done already significant work in environmental education.

Many countries now pursue active policies to help their cities, regions, towns and neighbourhoods become more attractive. But most countries find that this requires new skills, new ways of thinking and new ways of working. The skills of place-making are not often taught in schools, and there are few professional or academic qualifications that address them explicitly. Jose Manuel Henriques from Portugal at the Symposium of Academy for Sustainable Communities in Leeds November 2006, was mentioning the Lisbon strategy for Europe and he was emphasizing the inscrutable role of the university.

The traditional university with a positivistic approach is prepared for creating scientific knowledge. But real world problems often cut across existing disciplines. Therefore transdisciplinarity offers the prospect of generating the relevant knowledge which implies cooperative research driven by social needs and through mutual learning. It is also generic skills - such as leadership, community engagement, project management, partnership working and effective communication - that underpin the technical and specialist expertise, helping people to overcome obstacles and leading to a greater understanding of how to make places truly sustainable.

Enhancing student and staff mobility across Europe, attracting good students, improving the EU innovation capabilities, are some of the key challenges for the development of the European Higher Education Area. These co-operations are designed to reduce cultural barriers between the European states and to promote the building of a common European Education space. The Institute of Soil Research (IBF) in co-operation with the Centre of Environmental Studies and Nature Conservation (ZUN) at the University of Natural Resources and Applied Life Sciences in Vienna – BOKU, were submitting a project proposal to the EU in March 2004 as a Socrates Erasmus Intensive Programme (IP).

The project “Responsible Use of Soil and Land and Regional Development” – IPSOIL, brings together students and staff members from universities in different participating countries in order to encourage efficient and multinational teaching of special topics, enable students and teachers to work together in multinational groups to gain new perspectives on the topic being studied, and allow members of the teaching staff to exchange views on teaching content and new curricula approaches and to test teaching methods in an international classroom environment. Within the IPSOIL project students and staff members from universities of 9 participating Danube countries were elaborating a common vision and to co-operate in the development of measures against uncontrolled sealing and damage of soil and land, aiming at a balanced production and also developing concrete measures for integrated land utilisation to initiate a ‘learning region’. [see: Project IPSOIL; www.academia-danubiana.net]

The didactical concept of the IP pursues a transdisciplinary approach. The architecture of knowledge integration distinguishes between three levels – understanding the problems (first phase), conceptualizing through synthesis by methods of knowledge integration (second phase) and third causal explaining based on arguments arranged according to propositional logic.

Within the first phase of the IP SOIL I project from 2004 to 2005 we were analyzing the theoretical and practical examples from the ‘five soil research clusters’ [Blum et al. 2004], and were integrating the topics systemically within a search workshop, finally developing

working on various case studies and projects about soil and land use to understand the problems.

Within the second phase of IPSOIL II in March 2006, we were elaborating targeted projects of applied research for the multifunctional management of soil and land-use. The projects were dealing with primary and secondary responses towards satisfying the demand for improving new socio-political instruments or economic regulations, technical precautionary measures, legal instruments, ecological and also aesthetic structures.

Within the third phase of IP SOIL III, we were developing specific actions for policy support, to integrate the 'Thematic strategy for soil protection' from the DG Environment of the European Commission, within an empowering dialogue, to implement it on a regional basis. Therefore we want to achieve a cooperative network of universities, cities and towns along the Danube, emphasising a common vision of measures against uncontrolled sealing and damage of soil and land, intending to develop concepts for integrated land utilisation and to initiate a 'learning region'.

The 'learning region' should be seen as a continuous learning process, that provides the region with a cross-sectional platform to discuss sustainable land use development as a precondition for ecological awareness for collective action. It requires good levels of trust between regional and local administration and the different elements of stakeholders in the region based on the experience of working successfully together. It should enable the environmental and nature protection institutions together to release the potential of public, regional and political agencies and enable each of these to contribute to the achievement of awareness of a desirable and responsible land use of the region.

The CENTROPE region needs to become a 'learning region' and enhance institutional capacity building. This includes the capacity to work together between universities and between different groups like adult education and all kinds of regional partners or stakeholders. Such an example could be the lobbying of the two cities at the federal level for the establishment of a political process that enables the participating regions and cities to agree on the shape and content of their future co-operation. The CENTROPE initiative harbours a political process that enables the participating regions and cities to agree on the shape and content of their future co-operation.

EUROPE ON A CROSSROAD

Europeans are in the midst of a profound debate about our vision of the future. Romano Prodi, former President of the European Commission was commending Jeremy Rifkins' book, when he said: "*The European Dream*" mirrors the European soul, providing us with a clear reflection of who we are and what we stand for and aspire in the new Europe." Rifkin points out: "While the American Spirit is tiring and languishing in the past, a new European Dream is being born. It is a dream far better suited to the next stage in the human journey – one that promises to bring humanity to a global consciousness befitting an increasingly interconnected and globalizing society."

At the moment the European Union is a revolutionary model for the future to follow this provocative challenge. Mark Leonard argues: "It understands that preserving the planet for future generations is not just an existential challenge, it also makes good economic sense. But not only economic issues are pointing a new way to the future." [Leonard, 2007: p. 79] In

Europe a new set of values are emerging which are focused on sustainable development, quality of life and multilateralism.

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, 2004: p.3] But we must also recognize that the years after the Cold War witnessed the beginning of dramatic changes in peoples' identities and the symbols of those identities.

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 (EE) principles. The *second enlightenment* needs EE for self-organization, in qualifying students to take an active part regarding the solution of the future. These co-operations are designed to reduce cultural barriers between the European states and to promote the building of a common European Education space. The Socrates Erasmus program is a challenging task to encourage students and teachers to find 'common ground' in their understanding of the subject [Strasser, 2005: p.7-8], to know about different approaches and also disagreement/dissent, but it should give the opportunity to experience and to reflect different approaches.

Europe has become a giant freewheeling experimental laboratory for rethinking human conditions and reconfiguring human institutions in the global era. [Rifkin, p. 83] Sustainable development over unlimited material growth means to protect the interests of those who will come later, because we have loaned the land from our children. Within this relationship the programme Ecologisation of the Danube region offers the chance to realize a transdisciplinary approach between social, economic, technological and human sciences, implementing it within political-administrative systems. [Kvarda: 2004] Ecologisation means to establish sustainable development issues as a progressive task on all political levels.

The ecologisation of the social development means to introduce principles of ecology, environmental protection and education into all areas of social importance. An elaboration of strategies for improving cooperation of city councils and universities in the CENTROPE region could be established to improve regional development for responsible use of soil and land and integrated land utilisation issues in the Vienna Bratislava Győr region.

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