

Proposal full title: Transfer of knowledge on **R**esponsible **U**se of the **S**oil in The **W**estern **B**alkan **C**ountries = TRUS -WBC

Proposal acronym: **TRUS-WBC**

Type of funding scheme: Coordination and support actions

Work programme topics addressed: Theme 6, Environment, Integrated Resources Management 4.2.1 ENV. 2007.4.2.1.1. Methodologies for scaling down to the regional and local level the analysis of policy impacts on multifunctional land uses and the economic activity.

Proposal

1. Scientific and/or technical quality, relevant to the topics addressed by the call

1.1 Concept and objectives

Soil is one of the most exploited and threatened resources in the Western Balkan Countries (WBC) undergoing a period of social and economic transition. The key reasons for this include the dynamic process of green-field investments, (re)privatisation of land, lack of an appropriate and well organised cadastre, the outdated land use planning and low awareness of the soil problem in local communities and their governance practices. Therefore the trend towards the soil demolition, extensive land surface sealing and obvious damages to the soil of one of the paramount and unrenovable resources and assets is continuing.

The project aims to establish preconditions to work out a **common understanding in the development of measures against uncontrolled soil** damages in the WBC and to foster measures for integrated land utilisation and environmental education.

The overall **goal** of the project is to **provide the opportunity to develop partnerships through actions of responsible soil use**, with existing centres of excellence in the EU's convergence and outermost regions, the Member States (MS) and the WBC. The common vision of this project is to work out measures against uncontrolled sealing and reasonable soil and land use, intending a balanced production and also developing palpable measures for an integrated and multifunctional soil and land utilisation.

The concept foundation of the project is:

- (a) to gather data on situation of soil use focussing on weaknesses, opportunities and threats in the WBC
- (b) to select best practices of responsible soil use of some MS for the sake of benchmarking
- (c) to define criteria for sustainable soil use in the WBC
- (d) to exchange know-how with respect to soil (and land) use among WBC and MS
- (e) to come upon the basic instruments for implementing responsible and sustainable soil use in the WBC

The behaviour and technology for the use of soil in WBC will be analysed and evaluated through joined research and education activities (specialised training in MS for PhD. students and/or post-doctoral researchers) organisation of workshops and conferences in both WBC

and MS. The whole research will result in elaboration of concepts and models for the future in the WBC. The project will initiate specific actions for policy support, to integrate the 'thematic strategy for soil protection' from the DG Environment of the European Commission in to a dialogue in the WBC. Consequently the project will create awareness among the participants of the WBC allowing for a responsible use of soils and initiate mutual learning among participants of the WBC and the MS alike.

The aim will be to make an umbrella of study exchange between the EU MS and the WBC. This shall foster the initiation of capacity building, enhanced communication and improving networking, developing partnership through action, exchange of know how and research of high quality.

Problem definition and core questions

Soil protection has never been ranking high among the priorities for environmental protection in Europe. Soils are generally not well known by European citizens, particularly since only a small fraction of the European population is currently living in rural areas having a direct contact with soils.

Therefore the question of the sustainable development of the Danube region and the WBC – our common living space – requires intensive co-operation especially in the fields of ecology, economy, social sciences and culture. The future of Europe depends on the quality of its human resources. Nowadays, this means a population that is well educated and highly skilled, capable of leading the change of the knowledge economy and society. The goal is clear: our universities and research institutions must become more attractive, to cooperate with regional development issues and be aware of cultural, economic and social questions. University teachers and students, planners and concerned citizens in administration, business and politics are expected to co-operate. We need to create conditions so that they can deliver their full potential.

Therefore it is necessary to implement measures improving access to knowledge and the information society, which will be promoted by mutual learning, interactions and transfer of knowledge between the participants. Learning as integral part of planning has become an important area of practice. We must become involved with group processes that develop dynamically in ways that cannot be foreseen.

The **DPSIR Framework** developed by the European Environmental Agency (EEA) allows for the comprehensive modelling of complex soil and environmental systems thus answering key questions. The soil indicator framework, or DPSIR approach as a theoretical basis and its application in practice help us to understand complex systems and soil related processes and to react by developing responses and solutions for strategies and operational procedures, for fostering responsible use of soil and land¹. Indicators allow for the monitoring of key objectives like 'responsible use of land and preserving the landscape'.

Soil is an asset that is extremely short and cannot be reproduced and which has always been the subject of strong conflicts with regard to utilisation. Moreover, driving forces of land and soil degradation have effects on the dimension of space and long term temporal scales.”

¹ BLUM, Winfrid, E.H.; BÜSING, Jürgen; MONTANA-RELLA, Luca (2004): Research needs support of the European thematic strategy for soil protection. Trends in Analytical 'chemistry. Vol. 23, No.10-11, 2004. Published by Elsevier Ltd.

The question is how to bridge between the available scientific knowledge on one side and those who need it for defining policies, and operational procedures, such as stakeholders, and politicians and decision makers on the other side. Within the Socrates Erasmus project “Responsible use of soil and land and regional development” (IPSOIL), this question has been worked on since 2005. The first results can be found on the following website:

<http://www.academia-danubiana.net/projects/IPSOIL%20II.html>. Therefore the main target will be to carry out actions for knowledge transfer, such as awareness campaigns, education and interpretation of economic systems related to environmental problems and to develop methodological approaches, in order to initiate a dialogue between those who own soil and represent economic interests and those who are interested in keeping soil multifunctional as a public interest. The concept for a ‘learning region’ was agreed to establish a sustainable learning support and mobilise regional and local actors, authorities, organisations and associations to a committed and effective involvement, utilisation and support for developing new concepts of responsible land use.

To transfer good practices and facilitating knowledge transfer the project will organise the external communication on the Internet by the website <http://www.academia-danubiana.net> Internal communication will be supported by an e-learning platform (based on the open-source solution Moodle) which comprises various tools for online collaboration, including discussion boards and chats as well as for data exchange.

The **question** will be, how to bridge between the available scientific knowledge on one side and those who need it for defining policies, and operational procedures, such as stakeholders, and politicians and decision makers on the other side. Therefore the main target will be to carry out actions for knowledge transfer, such as awareness campaigns, education and interpretation of economic systems related to environmental problems. This means the project will develop a dialogue between those who own soil, connected to business and economic interests and those who are interested in keeping soil multifunctional as a public interest.

Social aims of the project shall enhance the ability to manage complex social matters constructively. Therefore the project will stimulate the mutual learning process for sustainable land use and also foster the creation of social structures for a constructive encounter between persons with contrasting interests. If we want to bring society into the art of **governance** and to encourage the creativity of all social groups, than they should realize their intellectual potential for solving complex soil use problems.

The development of partnership will be realised by improving networking and exchange of know-how and experience between research centres in Portugal in the West of Europe, AT, HU and DE in Central Europe and Serbia, Montenegro, Bosnia & Herzegovina, Albania and Mazedonia in the Western Balkan region.

As an addition the efforts will be made to achieve greater international collaboration, competitiveness and problem-solving skills of the scientific community at the service of sustainable development. In compliance with the demands of sustainable development, inter- and transdisciplinarity, participation and networking must be promoted.

Transdisciplinarity requires methods to conceptualize **knowledge integration** for different, systems, disciplines, qualities and interests. Basic principles for sustainability are guidelines that should be taken into consideration by all the stakeholders in their decision-making. This requires a continued process taking economic, social and ecological qualities into account.

- **Social justice and co-responsibility** means to support participation and networking, enhance local identity and assure a living model of fairness and solidarity by the means of appropriate soil use

- A **viable economic system** for the future strengthening the economic structure to generate and secure employment, supports regionality and subsidiarity and enhances educational and permanent learning on the soil use.
- Finally it is urgent to have a **responsible management of the natural environment** for preserving the diversity of species and landscapes and the protection of environmental media and climate in West Balkan Countries, where the soil has the key role.

The objectives of this program will be to provide also tools for elaborating spatial integration models, new environmental technologies and implementing **environmental education** with the soil as a major subject into all sectors of activities. The results should be communicated to the political-administrative and the educational system to improve the knowledge between universities, local authorities, the public sector, industries and non-governmental organisations.

The real necessity and role of this project is to be seen as a factor to establish real opportunities for applied scientific research for ecological sustainable use of soil in order to gain experience for the specific usage of environmental tools already been in operation in EU and to allow new possibilities to be developed in the WBC's.

Objectives

With the **Decade for Education** for sustainable Development from 2005 to 2014 the UN proclaims that education will help to develop widespread understanding of the interdependence and fragility of planetary life support systems. Within the Comenius 3 network of Sokrates, the SEED project "School Development through Environmental Education" facilitates European school systems preparing the UN Decade in Education for Sustainable Development. 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. All of this take into consideration the soil and its protection and use problems. The most important consequences could be damaged biodiversity and water and its systemic links to the soil.

The University of Natural Resources and Applied Life Sciences – BOKU – in Vienna emphasises teaching and learning as the merits of internationalisation (see also the White Paper of the European Commission) The development of International Cooperation Networks should be considerably strengthened, as defined within the 'Strategy for the Internationalisation' of the BOKU'

In the year 2002, 15 European Environmental ministers have outlined first steps towards a strategy to protect soils, on a level corresponding to water and air. The European Parliament resolution on the Commission communication 'Towards a Thematic Strategy for Soil Protection' (COM(2002) 179) is targeting land use development, preventing sealing of soil like other protected targets. As a first step the project will try to integrate the strategic goals of soil protection and to implement it within an urban and rural framework. Threats to soil are often caused by social and economic damage, with the result of **distressed urban areas** are produced. They correspond to spatial concentrations of urban problems including diverse manifestations of poverty among inhabitants, economic decline and physical decay.

THE OBJECTIVES OF THE PROJECT ARE AS FOLLOWS:

1.. Establishing a basis for research and for the exchange of information of responsible soil and land use between researchers and stakeholders in the MS and WBCs, through trans-national two way secondments of research staff between the selected centres, with in-built obligatory return mechanism.

Structure changes in agriculture and their serious consequences for rural areas in recent years , one of them being the negative impact to hydrological cycle, clearly shows that

it is not enough to protect agricultural land from sealing but primarily from agriculture itself. As discussed by Carl Steinitz, the major stressor that cause impacts on biodiversity are urbanization related “development” in the region and construction and land use practices ... As development spreads, habitat is lost first. These direct impacts are caused by... human activities. Precise and strict analysis of different land and soil uses and their impact to soil ecosystems, wild biodiversity and potential soil multifunctionality is therefore one of the major tasks not only for experts in agriculture but for spatial and urban planners in particular. Good land and soil use planning rests on a good selection of criteria and indicators (d). The evident fact with general soil decay in the world is that the decision makers must understand the soil quality as a paramount responsibility as crucial to attaining the goal of sustainable development in rural areas. If not, the regional wellness and general social benefit will obviously fall down sooner or later.

Besides the changes in land use and the human impacts to the soil, especially in the countries in transition like WBC, have also consequences for the hydrological cycles. Sealing, compaction and missing natural cover is an evident problem in WBC with reducing infiltration and retention capacities of their landscapes. The problem of floods is more than often dependent there on wrong surface structures and soil disturbances. It is specially evident in rural regions with strong impact to planting and plant run-offs.

2.. Implementing innovative environmental R&D from abroad due to a benchmarking survey to integrate it with the needs of local development in the WBC for fostering territorial identity and culture. And to influence the social, technological, economic and ecological framework of environmental strategies.

Education has a key position to learn constantly about ourselves, our potential, our limitations, our relationships, our society, our environment, our world. Henceforth the UN is proclaiming with the Decade for Education for Sustainable Development from 2005 till 2014, that education will help to develop widespread understanding of the interdependence and fragility of planetary life support systems. Education for sustainable development is a life-wide and lifelong endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone.²

3.. Implementing new technological and behavioural approaches for sustainable development of soil by professional training in member states for Ph.D. students and/or post-doctoral researchers and knowledge transfer. Also sending scientists from the WBC centres for short stays, to laboratories abroad.

Particularly Western Balkan Countries require new skills, technologies and even new ways of thinking and working with soil. This is something that could be an added value of the project since the soil use and all connected natural systems within, are not often taught in schools, and there are few professional or academic qualifications that address them explicitly. The Lisbon and Gothenburg strategies together with the Territorial Agenda – draft - give directions to increasing competitiveness of European regions by better use of the territorial capital with soil as one of the main resources. The importance to the WBC is inevitable in this case.

Therefore transdisciplinarity offers the prospect of generating the relevant knowledge which implies cooperative research driven by social needs and through mutual learning. It is **generic skills** - such as leadership, community engagement, project management, partnership working and effective communication - that underpin the technical and specialist expertise, helping

² http://portal.unesco.org/education/en/ev.php-URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

WBC to overcome obstacles and leading to a greater understanding of how to make places truly sustainable.

4.. Facilitating local/regional sustainable development by disseminating environmental technologies, implementing EU environmental policies of responsible soil and land use and the best practices of the MS' research centres.

If the problem of soil degradation is to be solved and an understanding in the society for creating a sustainable use of the soil and a **multi-functional land management** developed, the choice of the interdisciplinary and transdisciplinary method is unavoidable. Multi-functionality land use means to substitute the zoning principle of the physical separation of urban and rural activities with a true mix of patterns, which functions in order to benefit life in all its forms. Multi-functionality of soil means that soil can be used in all its main functions, such as biomass production, filtering, buffering and transformation, as a gene reserve and as a geogenic and cultural heritage and also as a physical basis. Explaining the meaning of multifunctionality is therefore of utmost importance to WBC and also to all European countries.

5. Elaborating summary conclusions of the TRUS-WBC project and disseminating them to have an impact to the academic circles in WBC but also to the practical system of activities where the soil is the main resource – agriculture, forestry, water management, sealing etc.

A growing population and an increasing energy consumption, transport and agricultural activities, linked to **pressures** such as global climate variability and warming are adding increasing pressure on the reserve of natural resources in general and especially on the soil environment. Through sealing alone, Europe loses several square kilometres of fertile land every day. As a follow-up to the EU Communication, the European Commission, DG Environment, decided to formulate a 'Thematic Strategy for Soil Protection' (COM(2002)179final).³ The soil has to become the common concern primarily within local/regional communities in WBC and within their state public enterprises and offices.⁴

1.2 CONTRIBUTION TO THE CO-ORDINATION OF HIGH QUALITY RESEARCH

The present evolution of international climate policy will definitely influence all questions of land use and soil protection and cultivation. The climate convention is going more than ever to convert into a Meta-process. The special announcement of the International Panel on Climate Change (IPCC) is combining in an emphatic way all issues of the soil use, climate protection and economic development of the regions. There exists a huge demand not only for developing and checking methods and also delivering realistic estimations about potential and storage length, but much more than up to now to make clear the interrelationship of facts also beyond the scientific community, for getting more influence within political judgements.

In the year 2002, 15 European Environmental ministers have outlined first steps towards a strategy to protect soils, on a level with cleaning up our water and air. The European Parliament resolution on the Commission communication 'Towards a Thematic Strategy for soil Protection' (COM(2002) 179) <http://europa.eu.int/comm/environment/soil/> is targeting to conserve land use for example preventing sealing the soil next to other protected goods. As a first step we will try to integrate the strategic goals of soil protection and to implement it on a regional basis

For the first time in one of the European regions (WBC) we will transfer operational goals and objectives for soil protection within the basis of the 'EU soil communication': "Towards a thematic strategy for soil protection" – COM (2002, 179 Brussels). Within this strategy there are explicitly mentioned the objectives of this application, in particular the eight threats of soil.

³ BLUM W.E.H., BARCELO, D., BÜSING, J., ERTEL, Th., IMESON, A., VEGTER, J. (2004): Scientific Basis for the Management of European Soil Resources. Wien: Guthmann-Petersen

⁴ STOJKOV, Borislav (2006): The soil use in rural areas. IPSOIL Seminar. March 2006. Neusiedl am See.

One of the main tasks in the future of regional planning in WBC, but in some of MC also, will be to propose an optimisation process of sustainable soil use, taking into consideration all kinds of sustainability. For attaining the accessible reduction of increasing permanent sealed land a negotiation process should start with concerned stakeholders, reducing the overhanging needs for new building sites in relation to the demands of enterprises, neutralizing reserves of building sites, an effective policy for soils of the public sector and specially favoured promotion of area sparing building constructions and area-recycling. The declaration of soil protection from Osnabrück should be a basis for the coming international activities, as it is presently supported from the International Union for the Protection of Nature (IUCN), especially from the committee of Environmental legislation (CEL). It will be a good background to improving soil use in WBC compared to the present situation there

The proposed project will be implemented due to activities organized in different work packages. It has been prepared with 6 main work packages (from WP 1 to WP 6) with specified activities (tasks) complementing one another and responding the purposes (deliverables) to be implemented as a result of the project and to get benefits out of best practices.

The benefits from the coordination in the project are expected as follows :

- Exchange of know-how and experience of multifunctional soil and land use between the research centres in Member states and those of WBC through trans-national two-way secondments of research staff between the selected centres, with in-built obligatory return mechanism. Further development of National Scientific and R&D networks as advanced communication between universities, research units and industry
- Bringing together various R&D programs of soil and land-use, incoming experienced researchers having left the country and mainly young scientist of the Western Balkan centres with the aim of ensuring the synergic effect and international collaboration, for teaching, training and joint research activities.
- Increasing the mobility of scientists with a view to establishing “Science without Borders” initiative, to facilitate knowledge transfer at national and international level under the scheme at international conferences, workshops to expose them to a more international environment.
- Development of the RTD Capacity of the Western Balkan centres due to scientific knowledge transfer, awareness campaigns, education training and implementation and dissemination of demonstrating environmental technologies/systems.
- Improving networking and exchange of know-how and experience between the western Balkan countries and the member states
- Preventing :”brain drain” phenomena from rural parts of WBC
- Upgrading the research capacities for responsible soil and land use of highest quality
- Link towards EU projects ERANET Crue, IP-Soil, ILUP test

1.3 QUALITY AND EFFECTIVENESS OF THE SUPPORT MECHANISMS, AND ASSOCIATED WORK PLAN

The proposed TRUS-West Balkan project will be implemented due to activities organized in different workpackages. This will allow the project purposes to be achieved in a way to have each milestone (final event within the workpackage) accomplished and thus to start the activities for the next level but from the consequent workpackage. Such a working model will guarantee execution of the planned activities from every level for the purpose to get into the next one. And each activity of every next workpackage is a logical sequence of the passed one.

As a conclusion of this model six workpackages are foreseen (from WP 1 to WP 6) with specified activities (tasks) complementing one another and responding the purposes (deliverables) to be implemented as a result of the project and to get the benefits of our common practises. The workpackages include all the activities to be done to complete the elaboration of the specified phases of the project. One workpackage is suited to each phase including activities to ensure the implementation of the goals proposed on strategic level.

3 IMPACT

3.1 EXPECTED IMPACT LISTED IN THE WORK PROGRAMME

Concerning the objectives and the activities proposed in the TRUS-WBC Project and the scientific tools and approaches to be used in, the following impacts are expected:

- **scientific impact** and improving **networking** – built on the increased networking to provide a fundamental platform for advanced international collaboration and integration within the European Research Area.

The present evolution of international climate policy will definitely influence within a reasonable space of time all questions of land use and soil cultivation. Question of **Climate Change** in relation with all kinds of land use and forestry is combining in an emphatic way all issues of land use, climate protection and economic development of the regions. Sustainability assessment and Sustainable Development strategy definition need integrated modelling at the macro and sectoral level at the world, EU, national and regional dimensions for policy appraisal, including simulation, scenario building, risk analysis and forecasting.

In this respect, the development of quantitative and qualitative tools and analysis will combine economic with ecological modelling, integrating horizontal and sectoral topics such as technology, land-use, agriculture, forestry, energy, transport, biodiversity and social issues; these tools and analysis must integrate the externalities of policies and technologies.

Most important impact is to guarantee the functional ability and availability of terrestrial and aquatic ecosystems considering qualitative and quantitative aspects. To guarantee effective soil protection it is necessary to avoid an ongoing sealing process of the valuable resource of soil, to safeguard the fertility of the soil through erosion, prohibiting measures and agriculture with an ecological bias, also with the support of methods for an economic use of the soil, involving great responsibility.

Another important impact will be an increasing network as consider to research and the exchange of information between researchers and stakeholders through trans-national two way secondments of research staff between the selected centres, with in-built obligatory return mechanism within the Member States and the Western Balkan countries with a chance to build up for integrating also the demands of the Balkan countries.

- **R&D programs** of soil management, soil water-nexus and land use and soil perspectives

There would be newly developed best practice methods effects of realistic estimations about potential and storage length made, but much more than up to now there is a chance to make clear the interrelationship of facts also beyond the scientific community, for getting more influence within political judgements within WBC .

It will be a partial contribution to new sustainable development paradigma shift. Soils are not visible, only its surface and they are covered with plants, streets, houses, industries, places and many others. Our ground has primarily various functions for the environment and the human beings. Within new land uses and with losses of the multifunctionality of the ground, there are arising conflicts which we will demonstrate within this project. The five main soil research clusters (see BLUM, W.E.H., 2003) serve as a theoretical framework for the

realization of this project and are of great importance for positive impact of research co-operation.

- **Mobility-** exchange among participating institutions.

The project will offer for visiting scientists from WBC and from the MS the possibility to visit universities and research institutes and also they will be involved in research activities, teaching and regular university life.

There will also be new elements of blended learning, i.e. seminars and workshops requiring physical attendance complemented by online contents and activities will require a high degree of discipline and self-organization by the participants but also allow flexibility as everyone is allowed at his or her pace within the timeframe agreed on by the partners. The acquired soft skills will comprise experiences in managing, co-ordinating projects, experiences in teaching, new insights in didactics and learning.

- **Development of the RTD capacity** of the WBC centres

Positive impact will be caused by implementing innovative environmental R&D from abroad due to a benchmarking survey to integrate it with the needs of local development in the WBC for fostering territorial identity and culture and best practices and to influence the social, technological, economic and ecological framework of environmental strategies.

The strategic impact will be the evaluation of legal base and the development of common terminology and recommendations how to improve the legal base.

- **Capacity building** in the Western Balkan countries due to on the scientific knowledge and best practices, transfer of linked projects action research (based on the networking) but also on the educational teaching and training of scientific personnel and young researchers.

Another positive impact will be implementing new technological and behavioural approaches for sustainable development of soil and land use by professional training in member states for Ph.D. students and/or post-doctoral researchers and knowledge transfer by e-learning . Initiating capacity building, to manage change, to resolve conflict, to manage institutional pluralism, to enhance coordination, to encourage communication, and to ensure that data and information are shared. Also sending scientists from the WBC centres for short stays, to laboratories abroad will be of great importance.

- **implementation and dissemination** of soil and land use, technologies/systems for sustainable development and nature conservation as direct result of the cooperation through research and educational activities.

Final impact will be elaborating summary conclusions to be web based and disseminated to impact against the “brain drain “phenomena of the young generation and to facilitate international networking and communication.

- **Link towards EU projects**

Impact of facilitating local/regional sustainable development will be by disseminating environmental technologies, implementing EU environmental policies of responsible soil and

land use and the best practices of the MS' research centres. Thereby to improve national research quality for the needs of local and regional authorities and institutions and to increase job opportunities for scientists and young researchers.

STEPS NEEDED TO BRING ABOUT THESE IMPACTS

The **didactical concept** of the project TRUS-WBC 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.

a) Within the **first phase** of the project we will analyze the theoretical and practical examples about responsible use of soils. The first two work packages 'Project management & coordination' and 'Co-ordination of Research Activities' helps to understand complex systems and processes and produces responses and solutions for strategies and operational procedures. One of our first activities with all the participants will be a Kick off conference and research coordination meeting to build a sound basis for the implementation of the project.

We will create a common platform with the help of a **future search workshop**, to provide 'common ground' between the participants and the academics, preparing a dialogue in order to abolish inherent assumptions of the team members about the issues of sustainable soil management, soil-water nexus and land use and soil perspectives and to admit an authentic mutual thinking. In such a way participants see the world in a different perspective. Mutual team learning therefore can contribute to new perspectives and reflexion of visions.

b) Within the **second phase** of the project we will identify local needs, prepare training material and put all the relevant material online. The third and fourth work package is about IT & Training and the mobility of the scientists. Knowledge integration will take place by experiencing from foreign research institutions and organising the mobility of the scientists from the WBC into the MS and vice versa. If we want to solve the problems of soil degradation and develop an understanding in the society for creating a sustainable use of the soil and a **multi-functional land management**, we have to choose this interdisciplinary and transdisciplinary method.

c) Within the **third phase** of the TRUS-WBC project, we will initiate the 'Exchange of Best Practices by Teaching and Training' (WP5) and finally to collect all the information during the project time to put it at the participants disposal, supported by e-learning as a contribution for an intercultural dialogue for future lifelong learning activities. (WP6)

If we aspire new research methods and educational concepts, we have to change our traditional opinion within our scientific comprehension. We have to engage ourselves within group processes, which are evolving dynamically and dead openly to the intended procedure. Such a network of academic and professional representatives from different branches enables a transdisciplinary process, which must tackle several quite different issues which together are crucial for success:

- Produce knowledge that is scientifically reliable
- Address important issues in society to produce knowledge that is relevant for the future development of society and nature
- Involve actors and stakeholders in society in stimulating the mutual learning process between science and society that is necessary to producing knowledge that is effectively used

EUROPEAN APPROACH AND OTHER INTERNATIONAL RESEARCH ACTIVITIES OF THE PROJECT TRUS-WBC

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. In the year 2002, 15 European Environmental ministers have outlined first steps towards a strategy to protect soils, on a level corresponding to water and air. The European Parliament resolution on the Commission communication 'Towards a Thematic Strategy for soil Protection' (COM(2002) 179) is targeting develop land use, preventing sealing of soil like other protected targets. As a first step we could try to integrate the strategic goals of soil protection and to implement it on an urban and rural basis. Threats to soil are often caused by social and economic damage, with the result that distressed urban areas are produced. They correspond to spatial concentrations of urban problems including diverse manifestations of poverty among inhabitants, economic decline and physical decay.

The University of Natural Resources and Applied Life Sciences was carrying out a Socrates Erasmus Intensive (IP) program from 2004 to 2007 with students and staff members from universities of nine participating Danubian countries. The Intensive Program "Responsible Use of Soil and Land and Regional Development" (IPSOIL) is a study program to achieve an increase in student and staff mobility and to promote inter-institutional co-operation. The **goals** of this IP are to work out 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'. (IPSOIL - see on the website www.academia-danubiana.net)

The present evolution of international climate policy will definitely influence within a reasonable space of time all questions of land use and soil cultivation. The climate convention is going more than ever to convert into a Meta-process. The special announcement of the International Panel on Climate Change (IPCC) for land use and forestry is combining in an emphatic way all issues of land use, climate protection and economic development of the regions. There exists a huge demand not only for developing and checking methods and also delivering realistic estimations about potential and storage length, but much more than up to now to make clear the interrelationship of facts also beyond the scientific community, for getting more influence within political judgements.

In the year 2002, 15 European Environmental ministers have outlined first steps towards a strategy to protect soils, on a level with cleaning up our water and air. The European Parliament resolution on the Commission communication 'Towards a Thematic Strategy for soil Protection' (COM(2002) 179) <http://europa.eu.int/comm/environment/soil/> is targeting to conserve land use for example preventing sealing the soil next to other protected goods. As a first step we will try to integrate the strategic goals of soil protection and to implement it on a regional basis

For the first time in one of the European regions we will transfer operational goals and objectives for soil protection within the basis of the 'EU soil communication': "Towards a thematic strategy for soil protection" – COM (2002, 179 Brussels). Within this strategy there are explicitly mentioned the objectives of our application, in particular the eight threats of soil.

The "Guiding Principles for Sustainable Spatial Development of the European Continent" were adopted by the European Conference of the Ministers Responsible for Regional Planning" (CEMAT) in September 2000. "The aim is to bring the economic and social

development of each region into harmony with its ecological surroundings and cultural heritage in a long-term, large-scale and balanced spatial development.”

ASSUMPTIONS AND EXTERNAL FACTORS FOR ACHIEVING THE IMPACTS

On the assumption the management structure and decision making mechanism of the project covers and carries out all management activities, so our project relies to achieve the tasks mentioned in WP 1 and 2.

Concerning the objectives and the activities proposed in the project related to the scientific and research part, WP 3 and 4, IT & Training related to the mobility of the of the scientists, we have had always good results to achieve the goals.

But finally we have to submit that 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. That means we have to create a social field within the project on living soil and generating social capital from learning by experience through a special learning culture. (Rosa Strasser) This will lead to a careful preparation of the whole process-design.

3.2 SPREADING EXCELLENCE, EXPLOITING RESULTS, DISSEMINATING KNOWLEDGE

We are able to contribute to first steps towards a strategy to protect soils, on a level with cleaning water and air by raising up awareness of citizens and motivation of **stakeholders**.

Transdisciplinarity requires methods to conceptualize knowledge integration for different, systems, disciplines, qualities and interests. Basic principles for sustainability are guidelines that should be taken into consideration by all the stakeholders in their decision-making. This requires improving the quality of life as a continued process taking economic, socio- cultural, ecological and urban qualities into account:

3.2.1 Social justice and co-responsibility means to support participation and networking, enhance local identity and assure a living model of fairness and solidarity,

- A viable economic system for the future strengthening the economic structure to generate and secure employment, supports regionality and subsidiarity and enhances educational and permanent learning,
- Finally we need a responsible management of the natural environment for preserving the diversity of species and landscapes and the protection of environmental media and climate in BG
- Balanced sustainable urban settlement structure based on cultural identity and visual quality perception

The impact of this program will be to provide also tools for elaborating spatial integration models, new environmental technologies by specific usage of environmental tools already been in operation in EU and to allow new possibilities to be developed in the WBC's. and implementing environmental education into all sectors of activities. The results should be communicated to the political-administrative and the educational system to improve the

knowledge between universities, local authorities, the public sector, industries and non-governmental organisations for inst. by e-learning platform.

The Balkan Soil and Land Use Project can bring serious contribution within the next aspects:

3.2.2. Achieving a more effective coordination in the process of carrying out the national and European R&D and technological activities,

- Establishing a harmonized European policy in the sphere of scientific research and technological development which will subsequently exert its influence on the development of the national economies of the European countries as a whole and in particular WBC because ERA initiative is of importance not only for the European Member States but and for the West Balkan countries as well.