Research Activities as part of the ILMM-BSE project

The research activities within the scope of the Project “ILMM-BSE Integrated Land-use Management Modelling in Black Sea Estuaries”, funded by the European Union under the programme Black Sea Cross Border Cooperation, Joint Operational Programme are implemented by four of the project partners - Namik Kemal University (Tekirdağ, Turkey), State University Prof. Dr Assen Zlatarov (Burgas, Bulgaria), CIVITAS (Georgia) and UKRMEPA (Odessa, Ukraine).

Research carried on, (i) Development of integrated GIS for coastal deltas and associated watersheds as a tool for sustained management practices; (ii) Establishments of a model bank; (iii) Assessment of carrying capacity and potential for aquaculture production by modelling; (iv) Modelling possibilities of future of deltas under climate changes, sea level rising and disaster; (v) Assessment of the result of modelling and monitoring studies of existing projects; (vi) Real-time monitoring strategies and methodologies.

Research carried on, (i) Assessment of ecosystem characteristics and biodiversity of Black Sea deltas; (ii) Assessment of SES characteristics and biodiversity of Black Sea deltas; (iii) Assessment of present transport, energy and natural resources capacity in the territory of deltas within Black Sea basin; (iv) Development of a methodology for estimation of NC value; (v) Assessment of geological/geo-chemical characteristics of deltas; (vi) Soil characteristics and their potential for various land-use options, including agriculture and forest; (vii) Air-Land-Sea interaction problems; (viii) Classification of Black Sea deltas.

Research carried on, (i) Review of existing EIA/SIA/CIA regulation for land-use planning and the development of new regulations; (ii) Risk assessment of the results of a lack of sustainable land use planning; (iii) Sustainability impact assessment of land management and regional development strategies; (iv) Evaluation of cost-benefit analysis; (v) Evaluation of cost-effectiveness methodologies.

Research carried on (i) Development and evaluation of criteria and standards for implementation of integrated sustainable land-use planning and management; (ii) Development of indices and index for assessing land-use impacts on delta ecology; (iii) Erosion and desertification risks assessment for watersheds; (iv) Development of tools for predictions required for decision-making; (v) Methodologies for qualitative and quantitative accounting of the multifunctional effects of land management and development strategies with regard to environmental protection, rural development, land use, landscape, tourism, recreation,
agriculture and forestry activities;

(vi) Assessment of trans-boundary problems; (vii) Thresholds of sustainability; (viii) Guide for the development of decision-support systems; (ix) Strategies for public and stakeholders’ participation in the decision making process; (x) Institutional strengthening for land-use planning authorities; (xi) New institutional legislation for land-use planning authorities; (xii) Evaluation criteria for Natural Parks, Natural Assets, and World Heritage Sites in estuary watersheds; (xiii) Development of an integrated framework analysis; (xiv) Impact assessment and management tools for sustainable land use; (xv) Development of P-S-R of indicators for the use of decision makers.

Both carrying capacity of sensitive target areas and level of these beneficial uses for sustainable and cost-effective estuary ecosystems will be addressed by joint research activities. This will be through the development of an integrated and object-oriented model, coupled to GIS and through quantifying the all fluxes of various land-use alternatives through the ecosystem, in order to assess potential impacts on the function and structure of this ecosystem. For this, the approach is through enhanced/developed models and tools to be used for integrated sustainability impact assessment. Consequently, the following research activities focuses on understanding, analysis, integration and evaluation will be carried out.

---

The project Integrated Land-use Management Modelling of Black Sea Estuaries (ILMM-BSE) is financed by the Second call of the Joint Operational Programme “Black Sea Basin 2007 - 2013” [http://www.blacksea-cbc.net](http://www.blacksea-cbc.net). It started on 25 May 2013 and involves partners from four countries: Bulgaria, Ukraine, Georgia and Turkey. The duration of the project is 24 months. The overall objective of the project is to develop, enhance and evaluate impact assessment and management tools for the sustainable land use of the watershed areas of coastal deltas.

Project funded by the
EUROPEAN UNION

*****

This document is prepared with the financial assistance of the European Union. The responsibility for its content is only of Bourgas Regional Tourism Association and it in no way represents the official position of the European Union.