

PROJECT IMPLEMENTED BY

Lake Balaton Development Coordination Agency (National Implementing Agency)



The Lake Balaton Development Coordination Agency is a Hungarian non-profit institution and the development agency of the Lake Balaton Development Council. The Agency performs professional and operative duties promoting the development of the Lake Balaton Resort Area related to the activities of the Council. The aim of the Agency is to provide effective assistance so that Lake Balaton and its vicinity should become one of the most attractive and successful regions in Hungary and Europe for local people, tourists and local workers, as well as investors. The most important tasks of regional cooperation for the Lake Balaton Resort Area are sustainable tourism development, environmental protection, traffic infrastructure and the development of human resources.

PROJECT PARTNERS

International Institute for Sustainable Development



The International Institute for Sustainable Development contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change, measurement and assessment, and sustainable natural resources management. IISD's vision is better living for all-sustainably; its mission is to champion innovation, enabling societies to live sustainably. IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States.

United Nations Environment Programme, Global Resource Information Database, Europe



GRID-Europe is one of United Nations Environment Programme (UNEP) major centres for data and information management, with a unique, "value-adding" mandate in the handling of global and regional environmental data, which in turn support the environment assessment and early warning activities of UNEP and its partners.

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BALATON ADAPTATION PROJECT



LAKE BALATON INTEGRATED VULNERABILITY ASSESSMENT, EARLY WARNING AND ADAPTATION STRATEGIES

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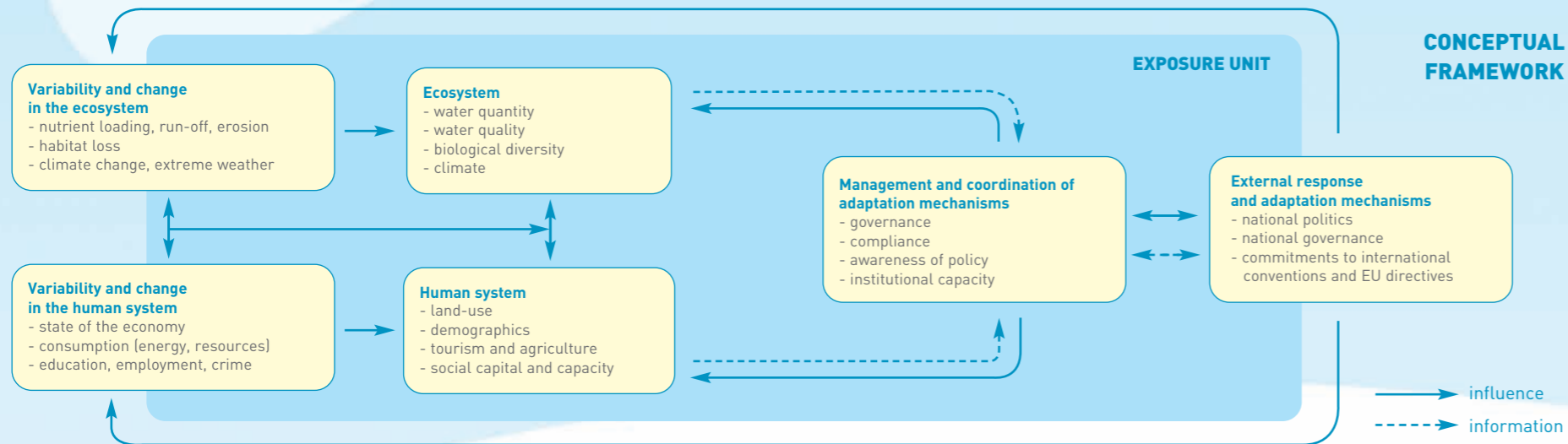
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A medium-sized UNDP-GEF project of the Lake Balaton Development Council



A CONCEPT FOR INTEGRATED ASSESSMENT

As shown on the figure, ecological or socio-economic stresses cause variability and change in the human and ecosystem in the exposure unit. The exposure unit is the lake along with 52 lakeshore communities. The project will monitor how change affects these systems and how change in one system may affect the other. Information from monitoring networks is transferred from the systems to the management mechanisms. Adaptations are made in response to the vulnerabilities that are identified at the management level. Management policies and plans influence the ecosystem and human system, as well as external response mechanisms. Information and influence flow between the local and national management mechanisms. National government decisions can therefore influence regional human and natural systems through policies, plans and decision-making processes.

INTEGRATED ASSESSMENT MODEL

In order to study the dynamics of environment-economy-society interactions, an integrated assessment model will be developed, following the logic of the conceptual diagram. The model is supported by a suite of indicators covering ecological, social and economic aspects of vulnerability; while including an integrated assessment of historic and current problems. The model will also help to plan for potential change in the future. For example, water (quality and quantity) and natural habitat can be analysed as a function of climate, land use and demographic change. Model scenarios and associated procedures will be developed for medium- and long-term time frames, providing mechanisms for early warning and development of alternative planning schemes. Alternative scenarios will explore possible adaptation and mitigation options.

Capacity development

In order to harness the potential for emerging adaptation options in the region, capacity and understanding around adaptability, resilience, and vulnerability will be increased. The goal of this process will be to enable local stakeholders to formulate, and successfully implement, adaptive strategies that are compatible with the tenets of sustainable development. This includes training programs aimed at strengthening local infrastructure, management and governance.

Adaptation pilot projects

Pilot projects will use direct action to facilitate adaptation in the region. They will enhance local level adaptation with the participation of communities, local governments and NGOs. A mechanism for monitoring and evaluating the effects of pilot projects will be established.

Policy and extension

The goal is to strengthen decision-making to achieve better alignment between national policies and local adaptation needs. This includes identifying policy barriers, analysing vulnerability and adaptation, facilitating dialogue between stakeholders, identifying key policy and planning tools, and finally communicating the results through local and international channels.

WHY IS THIS PROJECT IMPORTANT?

Lake areas are one of the most fragile areas where humans and nature interact. Management of environmental, socio-economic and development issues have a long history in the Lake Balaton Resort Area. The most recent and most dramatic issue was the negative water balance from 2000-2004. The impact of this event and riparian habitat degradation, plus a history of water quality problems, has raised questions as to the vulnerability of the area with respect to climate change. This is especially pertinent in scenarios where the effects of climate change are aggravated by other pressures such as the development of natural landscapes.

WHAT DO WE AIM TO ACCOMPLISH?

The overall purpose of the project is to contribute to a better understanding of the Lake Balaton ecological and socio-economic system's vulnerability and resilience and to build capacity for more effective policy-making and adaptation measures in response.

Indicator development, scenario analysis and modelling will enable the project team to assess vulnerabilities associated with the following target issues:

- Water quality improvement
- Water quantity control
- Land use change
- Biodiversity conservation
- Demographic change

A better understanding of vulnerability in the region will help shape new adaptation responses in communities and local and national governments. Capacity development and adaptation pilot projects will target local audiences and municipal governments while policy and extension will reach local, national and international audiences.

VULNERABILITY, RESILIENCE AND ADAPTABILITY

Vulnerability is the extent to which global change (including climate change) may damage or harm a system. It depends on a system's sensitivity and ability to adapt to new conditions. The vulnerability of the environment, economy and society is measured based on the sensitivity of these three 'systems' to stresses such as climate change and land-use. If these changes surpass critical thresholds, environmental services that benefit society, such as clean water and good soil, may radically change.

Resilience is a measure of the ability to withstand and recover from stresses on a system. Therefore, the healthier a system, the greater its resilient capacity.

Adaptability is the degree to which adjustments are possible in practices, processes or structures of systems to projected or actual changes. Adaptation can be spontaneous or planned, and can be carried out in response to or in anticipation of changes. For the purposes of this project, adaptation is to be implemented preemptively to mitigate some of the key pressures before they become too severe.

Global change and other pressures arising from local and national development represent challenges that local communities and all levels of government should collaboratively address. For the interrelated systems of the environment, economy, and society, this could mean changing land-use patterns, increasing diversity in the economy or increasing the level of education in communities. In order to successfully adapt, communities must have the right skills and information, as well as willingness to work together towards well-outlined common goals.

Definitions adapted from UNEP/GRID-Arendal and the Australian Government, Department of Environment and Water Resources

