

Memorandum

Research requirements for a sustainable development of the Vjosa River corridor

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Extensive river bed of the Vjosa near Qesarati. © Gregor Subic

1. Over the past two decades, the value of river systems and their floodplains for human well-being has clearly been identified: natural rivers provide a wide array of ecosystem services, such as natural purification of water, vast groundwater aquifers for drinking water supply and agriculture, flood mitigation, maintenance of natural biodiversity, and unique opportunities for recreation and tourism development.
2. The significance of these ecosystem services has been recognized by EU policy (e.g. EU strategy to halt biodiversity loss by 2020, EU COM Green Infrastructure Initiative) and thus have also entered into regulations for environmental impact assessments. Ecosystem services have been widely recognized as a useful tool for a holistic approach to solve multiple ecological and socio-economic challenges.
3. Due to a lack of proper environmental assessments, river engineering in industrialized countries has in the past resulted in profound and long-term negative environmental consequences and trends, e.g. increased frequency of catastrophic floods, reduced water quality, uncontrollable incision of river beds, dwindling of groundwater resources in alluvial floodplains, and loss of biodiversity. Today, this historic over-regulation of rivers necessitates costly restoration measures for compensation.

4. Meanwhile, our knowledge of the role and functioning of river systems has evolved hugely due to management oriented research. This led to a new „echohydrology” paradigm: in order to avoid undesired effects on society, each management project requires a detailed assessment, which must include prognostic evaluation of the expected impact combining hydrology, sediment transport processes and ecology.
5. A modern conception of integrated management of river corridors must follow the European Water Framework Directive, EU Natura 2000 Directive, EU Birds and Habitats Directive and EU Flood Risk Directive. This requires an interdisciplinary assessment of the hydrologic, geomorphologic and ecologic status quo and the impacts of any major construction projects.
6. The formulation of management goals in regulated rivers of the industrialized Europe is generally based on the pre-impact reference states derived from historical analysis, while the ecological structures and processes of pristine European river corridors are poorly known.
7. In this respect the Vjosa catchment – in its state of little anthropogenic impact – may serve as a large scale natural refuge and laboratory of pan-European significance. Due to its undisturbed river continuity, sediment transport, river morphodynamics, as well as its expected high and specific biodiversity, the Vjosa represents a unique international model system for intercalibration of river assessment approaches, and could serve as an international reference site for climate change research.
8. Therefore, current plans for the construction of hydropower dams require detailed assessments of hydrologic, sedimentological and ecological structure and dynamics, which could also enable the development of alternative low-impact concepts. We urge that all environmental impact assessments for any hydropower development strictly follow EU standards.
9. Hence, we strongly recommend a 3-year-moratorium on construction plans on the Vjosa and her tributaries. This would enable for the implementation of an integrated assessment programme on the Vjosa, carried out by Albanian and international experts. This moratorium would also allow exploring the possibilities for EU funding to support sustainable development in the region.
10. At the same time, an open discussion process with a clear structure, mandate and decision rules and involving all major stakeholders must be initiated. Discussions should explore scenarios for the sustainable development of the Vjosa river corridor, acknowledging the links between the integrity of the Vjosa ecosystem and economic, social and cultural aspects of human well-being.

We, the undersigned scientists from Albania, Austria and Germany, request that an interdisciplinary research and assessment program be started on the Vjosa River system, to be carried out in a cooperation of Albanian and international colleagues. Together with further colleagues, the undersigned will seek for international funding of a 3- years programme.