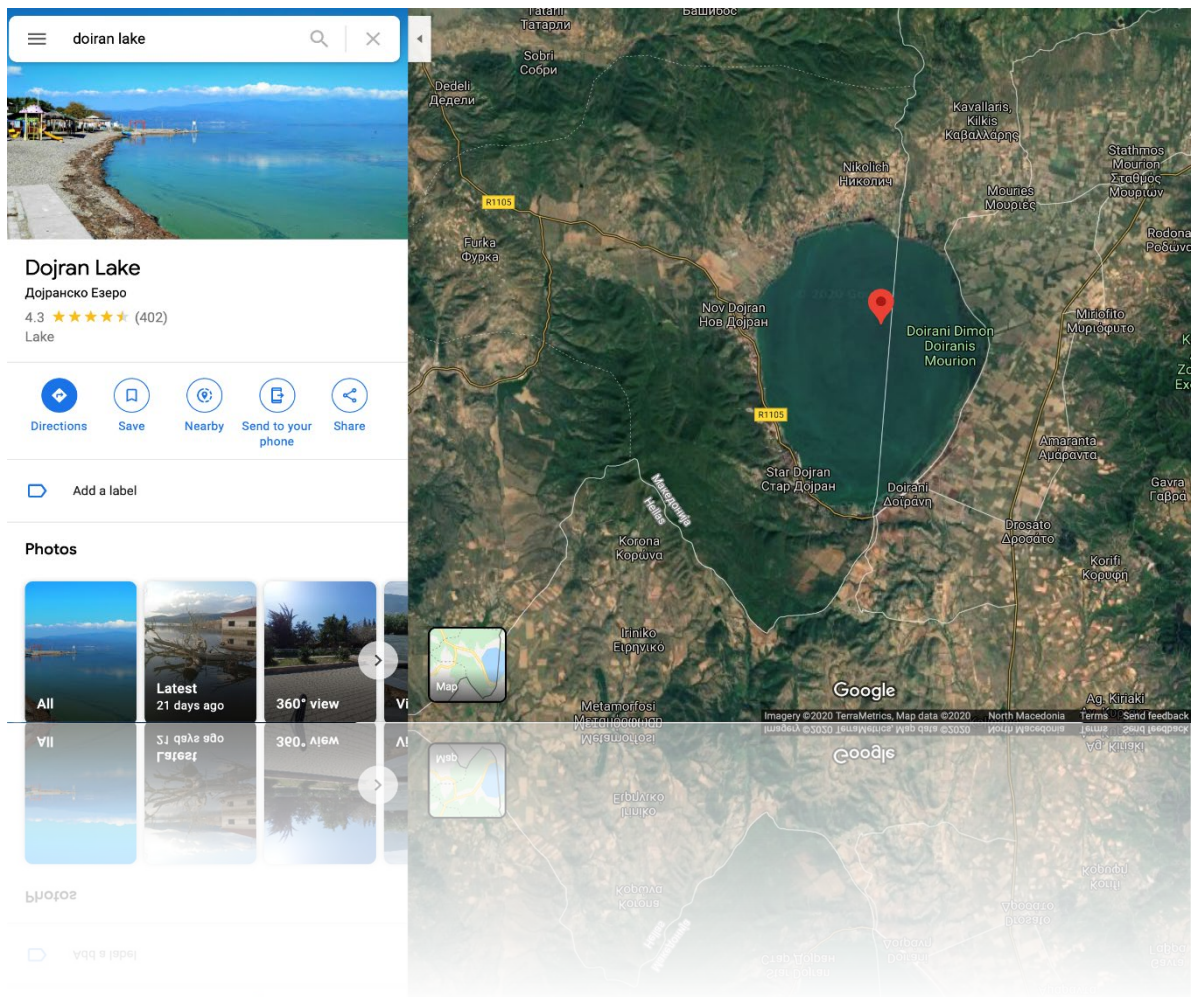




Strategic Foresight & Planning for **Doiran Lake**

FINAL REPORT



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Developed by:

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List of abbreviations

EC - European Commission

LSGU - Local Self Government Unit

EU - European Union

SEA - Law on Environment

LWM - Law on Waste Management

PUC - Public utility company

MoEPP - Ministry of Environment and Physical Planning

NEAP - National Environmental Action Plan

RNM - Republic of North Macedonia

SEA - Strategic Environmental Assessment

FAO – Food and Agriculture Organisation of the United Nations

IUCN – the International Union for Conservation of Nature

IWRM – Integrated Water Resource Management

SPA – Special Protection Areas

WFD – Water Framework Directive

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Disclaimer

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Executive Summary

Making a strategic foresight and then complement it with strategic planning, tactical management and operational action plans has been a quite interesting and intriguing challenge. *This study represents a conceptual bundle of the most necessary components, mechanisms and principles that are outlined for our area of interest - the transboundary Doiran Lake, with the aim to facilitate stakeholder action, serve as inspiration for various effective activities and be a governance booklet for 'the why,' 'the what' and 'the how' to reason and act.* Adaptation to circumstances needs to be complemented with initiating positive change for Doiran Lake ecosystem salvation, rehabilitation and sustaining, predominantly from managerial and self-managerial point of view. Hopefully, that will result with a chance being given to the natural mechanisms and systems to do their part of the story.

The **strategic foresight** of the future means envisioning where the **Doiran Lake** socio-technological-economical-environmental system may and can be 2 decades from now. The methodology streamlined us to find most relevant megatrends, assess contextual trends, other factors to be considered, weak signals and developments to be able to contemplate two continuums - horizontal and vertical axis that help devise four scenarios to be used by policy-makers and all relevant stakeholders when taking affirmative action, but also what happens when being inactive or doing damaging activities.

It is more than clear that complex adaptive systems on this planet are interwoven and interdependent. The time has come to position every such endeavour like this to the principles of big picture view, systems design, transnational (not one-sided) reasoning and action, multidisciplinary approach, awareness and multi-stakeholder participatory working and living. Studies and relevant reports on the as-is situation in North Macedonia, but also the region of the Balkans, are capturing somewhat form-without function situation in the basic alignment with the global directions in preservation, environmental, societal, technological sustainable advancement: "In North Macedonia, the formal institutional framework for coordination of the implementation and monitoring of the Sustainable Development Goals of the 2030 Agenda for Sustainable Development is established; however, it is not active. The national policy framework is still under development. No document adopted at the national level refers to the Sustainable Development Goals." (United Nations, 2019) However, we are hopeful things will improve, or at least we will do our best in that direction.

Strategic foresight means taking a point in future that has potential to occur due to global megatrends, regional and local trends and developments, informing oneself on the 'as-is' situation and then deploying strategic planning to outline strategic principles, tactical configuration and system design and offer action plans to help achieve it. It provides a methodological opportunity of connecting a preferable future with the current situation

and helping navigate through the imagined landscape of potential, possible and plausible scenarios, in order to avoid the preposterous.

Out of 30+ global megatrends, we identified in our horizon scanning 5 most relevant, strong and increasing ones - rapid urbanisation, increasing environmental pollution, increasingly severe consequences of climate change, increasing environmental pollution and diversifying approaches to governance and complemented them with contextual trends and weak signals. This led us to conceptualising the two **continuums** of (1) **existence of transboundary (or not) systemic solutions** (ranging from no to existence of such solutions) and (2) **maintenance of ecosystem habitat** (ranging from degraded to regulated). These axes helped us reason what would happen if human actors improved towards transboundary governance and systemic approaches or not, and how could nature cope with it. Next, we devised the four scenarios across the two axes landscape, portraying SCENARIO 1: **'DO NOTHING, DON'T CARE'** (meaning No systemic solutions and Degraded ecosystem habitat) - evaluating it as POTENTIAL which is pretty much if people and countries continue to do or not do, as until now. This is borderline scenario with the worst case of preposterous where even more devastation exists (and is not subject to our analysis). Moving on right on the horizontal axis, is SCENARIO 2: **'WILL OUR BEST BE ENOUGH?'** (where Systemic solutions are in place, but there is Degraded ecosystem habitat) - evaluated as POSSIBLE. The third scenario is in the upper left quadrant along the axis of ecosystem habitat regulation: SCENARIO 3: **'POSITIVE DEVIANCE'** (with No systemic solutions, but Regulated ecosystem habitat) - as a PLAUSIBLE scenario. However, all the stakeholder consultations following the Local Agenda 21 guidelines for participatory engagement, discussions and interviews were directed towards visioning and achievement on track towards SCENARIO 4: **'NATURE AND NURTURE'** (with transboundary Systemic solutions in place, and Regulated ecosystem habitat) as most PREFERABLE point in the future.

Each scenario was examined through feasibility analysis in terms of **technological, financial, social and environmental feasibility**. These components enabled mathematical **modelling and simulation** of most and least feasible alternatives to assist policy-makers on different levels in choosing the right paths. The **long-term strategies**, governing principles, development objectives and goals have been outlined to make distinctions of must- and can-do activities, **tactical management recommendations** and **action plans**. Primary and secondary data, public consultations, interviews, discussion groups and diverse inputs have been used to inform and design methodologically sound and applicable guidelines and alternative solutions.

The introductory part of the study is followed by explanation on the methodology, tools and techniques used, while in the third heading we elaborate on the carriers and workflow. Fourth part are the megatrends and other relevant developments, while in the fifth heading are the

horizontal and vertical axis as continuums. The four scenarios are outlined in the sixth part. The seventh part is consisted of the feasibility study in detail for all the scenarios and the mathematical modelling and simulation. The public consultations as integral part throughout the study are elaborated in the eight heading. The long term strategies, tactics and action plans are in the ninth followed by the references and bibliography.

