

Attachment 1.1 Project Matrix

	Project description (intervention logic)	Intent / Aim / Output indicators	Sources of verification	Assumptions and risks
Intent	<p>To fulfill the „Sustainable Development Goals (SDGs)“ adopted by United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. These include mainly SDGs 6. „Clean water and sanitation“ (6.1, 6.4, 6.6), SDGs 9. „Industry, innovation and infrastructure“ (9.1, 9.2) and SDGs 15. „Life on land“ (15.1, 15.2, 15.3).</p>	<p>Main indicators include increase efficiency and financial savings during construction of state and local infrastructure, decreasing of agricultural / forest land degradation, high protection, and sustainable use of natural resources (surface and groundwater) and drinking water supplies.</p> <p>Acquired outputs allow correct strategic decisions on infrastructures and natural resources development in water, agriculture, construction, and health sectors.</p> <p>Baseline: 0</p> <p>There are no relevant and accessible modern data on the geological and hydrogeological environment on a unified scale of 1: 1,000,000.</p>		<p>Assumptions</p> <p>The general trend of the government priority to sustainable natural resources, groundwater and land protection and infrastructure construction.</p> <p>Presence of significant gap in availability of readily retrievable and interoperable information on the nation’s geological environment context.</p> <p>The vitality of geological information as the base for fulfilling expansion of development multiple sectors.</p>

<p>Aim</p>	<p>General aim of the project</p> <p>Creation of uniform and comprehensive information of geological environment and groundwater resources on national level.</p> <p>Creation of harmonized geoscience information system per growing demand of governmental institutions and broader public that will foster noble, rapid, reliable, and strategic regional natural resources management.</p>	<p>Freely accessible maps of geological and hydrogeological environment in interactive on-line and printed (hard copy) versions.</p> <p>Increased professional competence of local experts and governmental staff.</p>	<p>Risks</p> <p>The partner institution will no longer be willing to cooperate, fulfil its duties and support necessary and relevant documentation (particularly the declared in-kind and expert contribution of the partner GSE)</p> <p>A considerable change in the exchange rate of the CZK against the ETB.</p> <p>The Project will not be approved in time by the relevant Ethiopian authorities and the agreement with MoFED will not be signed.</p> <p>The implementer will not be granted the funding needed for the entire duration of the implementation of the Project.</p> <p>Spreading of a pandemic and associated health / travel restrictions in the region of interest (e.g. Covid-19 international as well in between Ethiopian regions).</p> <p>Failure or shortage in running and maintenance of the GSE website hosting the on-line interactive map applications.</p>
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<p>Output</p>	<p>Output 1. Creation of the general geological and hydrogeological maps on a 1:1,000,000 scale</p>	<p>Indicators for Output 1. and related activities:</p> <p>Published maps (on-line interactive and hard-copy version; 250 pieces).</p> <p>Published explanatory notes describing the overall geological and hydrogeological setting of the country (250 pieces).</p> <p>Synoptic table of fault network bearing attribute sources of information and the importance of structures (for any fault structures displayed on the map).</p> <p>Guidebook summarizing quantitative groundwater resources in Ethiopia including definition of hydrogeological zones (most important aquifers) and the groundwater quality (50 pieces).</p> <p>Established groundwater monitoring network in five selected aquifers.</p> <p>Interactive web-map application of the geological and hydrogeological maps at 1:1,000,000 scale hosted by GSE (CGS) server providing on-line information about geology and groundwater resources.</p> <p>Number of visitors to the on-line web-map application and references in wider spectra of professional / applied outputs.</p>	<p>Sources of verification:</p> <p>Published outputs (maps, text explanations, guidebook) and freely accessible interactive maps on the hosted server of GSE/CGS.</p> <p>Libraries, state administration offices and local government authorities at all levels.</p> <p>Baseline and final state studies, annual monitoring records.</p> <p>Attendance sheets for conducted trainings.</p>	
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	<p>Output 2. Increasing of professional capacities and promotion of output maps.</p>	<p>Indicators for Output 2. and related activities:</p> <p>Number of development programs and published outputs in the country citing or referring the geoscientific maps will increase.</p> <p>Increasing number of experts that are competent for independently carrying out future and further high-level geoscientific data compilation that is transferable to wider public and high-level decision makers.</p> <p>Attendance lists and evaluating results of co-operating experts, photographs and annual reports.</p>		
<p>Activities</p>	<p>Output 1.</p> <p>Activity 1.1. Review and appraisal of the existing sets of archived maps and other literary works</p> <p>Activity 1.2. Creation of topographic base map</p> <p>Activity 1.3. Remote sensing analysis and geophysical data re-interpretation</p> <p>Activity 1.4. Regular workshop on progress of established working teams</p> <p>Activity 1.5. Field work in selected</p>			

	<p>areas / transects</p> <p>Activity 1.6. Drilling of groundwater monitoring wells (5 sites)</p> <p>Activity 1.7. Creation of the geological map at 1:1,000,000 scale</p> <p>Activity 1.8. Creation of the hydrogeological map at 1:1,000,000 scale</p> <p>Activity 1.9. Explanatory booklet and groundwater monitoring reference guidebook compilation</p> <p>Activity 1.10. Interactive web-map application</p> <p>Output 2.</p> <p>Activity 2.1. Counterpart experts' capacity building in compiling maps</p> <p>Activity 2.2. Enhancing the capacity of stakeholder experts in groundwater data management</p> <p>Activity 2.3. Promotion and dissemination of the outputs</p>			
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