



## AMMENDED DISCLOSURE ON DEVELOPMENT OF THE THUCI DAM PROJECT PPP PROJECT IN EMBU COUNTY, REPUBLIC OF KENYA

### A. BACKGROUND:

The State Department for irrigation established vide Executive Order No.2 of 2023 with the mandate of National Irrigation Policy and Management; Water Harvesting and Storage for Irrigation; Management of Irrigation Schemes; Water Storage and Flood Control Management; Mapping, Designation and Developing Areas Ideal for Irrigation Schemes; Development of Irrigation Infrastructure and Land Reclamation for food security in Kenya. As part of its mandate, the State Department is desirous to implement the Thuci dam project in Embu and Tharaka Nithi Counties.

The objective of the dam project is to provide reliable irrigation water supply by conserving water during the rainy seasons and release it for irrigation purposes. It shall support the existing farmers 16,500 acres (6,600ha) of irrigation land in Runyenjes Constituency and 11,000 acres (4400ha) in Chuka Igambang'ombe Constituency adoption efficient irrigation systems. Other goals are to supply domestic water (treated water) to the nearby residents of both Tharaka -Nithi and Embu counties as well as to generate hydropower. All the technical designs, socio-cultural and Economic studies together with the Environmental-Social Impact Assessment (ESIA) in fulfilment of the requirements of the Environmental Management & Coordination Act of 1999 (EMCA), 1999 and Environmental management and coordination (EIA and EA) Regulations, 2003 have been carried out.

The project had been proposed for implementation under the Engineering, Procurement, Construction plus Finance (EPC-F) model however it could not progress due to change in policy and limited fiscal space for capital investments.

Following the Presidential directive on implementation of 100 dams under the PPP framework, there is an opportunity to implement the project.

The PPP Act 2021 allows the private sector to participate in the design, financing, construction, equipping, operations and maintenance and transfer of infrastructure. Section 25 (1) enables a national government contracting authority to prepare a list of projects that it intends to undertake on a priority basis under the Act and submitted to the Directorate for approval.

#### 1.1 Statement of the Problem:

The proposed Thuci dam on River Thuci is expected to conserve water during the rains and release it for irrigation purposes during the dry months of the year. It shall support 6,600ha of irrigation land in Kaagari-Gaturi Irrigation project area and beyond in and a further 4,400 ha on contract farming to be established in Mugomoni and Igamba Ngombe in Tharaka Nithi County. Currently, with the water stress exhibited in the irrigation scheme catchment, the run of the river flow can only support 900ha of subsistence irrigation farming. The farming system practiced in the project area is household production system whereby individual farmers manage their farms with major crops within the project area categorized as; food crops, industrial crops and horticultural crops. To tap the full potential, as provided in statutes, there is need to provide a water storage facility, promote enhanced agricultural production and value addition to the harvest as poor prices and waste is witnessed during high yields as there is no ready market for all the produce. In this regard, the project will have a second component as Phase 2 to provide the value addition needs as described in these studies.

#### 1.2 Prerequisite Conditions:

The proposed Dam project is contained in the country's vision blueprint of Kenya Vision 2030 as it supports the food security Agenda and value addition through agroindustry. Section 25(2) and 66(2) of the PPP Act, 2021 requires that a Contracting Authority only submit a project, which is part of the national development agenda. This is and within its legal mandate and the Kenya government ambition to construct 100 Dams and other water facilities across the Country.

The Ministry of Water, Sanitation and Irrigation in Kenya is mandated to provide for the development, management and regulation of irrigation, to support sustainable food security and socio-economic development in Kenya. The Ministry operates within the framework of the Irrigation Act Cap 347 and aims to ensure that water resources are developed, managed, regulated, protected, and equitably allocated.

### B. PROJECT DESCRIPTION

Item	Description
1. Project Name:	Thuci Dam
2. Contracting Authority:	State Department for Irrigation, Ministry of Water, Sanitation and Irrigation.
3. Project Location:	Runyenjes Constituency in Embu County and Chuka Igambang'ombe Constituency in Tharaka Nithi County.
4. Project Description	<p>The main objective of the project is to design a water reservoir to hold water during the rains and release it during the drought to irrigate 6,600ha, of land in Kagaari, Kyeni and Gaturi Irrigation schemes in including Iriari, Kanyuambora among others in Embu County and also increase reliability of irrigation water in Chuka Igambang'ombe irrigation schemes comprising of Magumoni, Thuita, Mukuuni, Magenka, Kavando, Thuci range, Itugururu, Kamaindi- gitogo, Mwienderi Thuci range, among others to cover 4,400ha in Tharaka Nithi County. This will meet irrigation, domestic, institutional and commercial and aqua farming demands. Through the construction of Thuchi Dam, the investors aim to harness, conserve, control and utilize the waters of Thuchi River for provision of water storage and to supply irrigation water.</p> <p>The amount of water required to effectively support the 11,000 ha was estimated in consideration of the crop, weather and irrigation areas of various climatic zones of the project as well as adopting efficient irrigation systems such as drip irrigation. The water demand for the proposed project is categorized into the; rural domestic water demand, urban domestic water demand, commercial water demand, and institutional water demand.</p>

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Project Description	On the proposed main dam site, the dam shall be constructed to provide irrigation requirement for a drought with a return period of 1 in 5 years. From the analysis done of demand and available water in the river at the proposed dam site, it was realized that the proposed dam site will have a capacity to hold 23 million m <sup>3</sup> of water with an estimated production of 80 million m <sup>3</sup> annually.
5. Project Need/ Benefits	<ul style="list-style-type: none"> <li>The proposed Thuci dam is expected to supply all water demands in its designated command area within the confines of Kagaari, Kyeni and Gaturi project in Embu County and in Chuka Igambang'ombe irrigation schemes in Tharaka Nithi County. These demands shall include irrigation, domestic, institutional and commercial and aqua farming demands.</li> <li>The water demand for the proposed project is anticipated to be useful to various beneficiaries as follows; <ul style="list-style-type: none"> <li>Rural domestic Water,</li> <li>Urban domestic Water,</li> <li>Commercial Water, and</li> <li>Institutional Water</li> </ul> </li> <li>149,000 m<sup>3</sup>/day of water was determined for both Irrigation and domestic demand for the project area. The total estimated yearly water demand is 54,620,742 m<sup>3</sup>/year, which is an average of 149,500 m<sup>3</sup>/day. However, the dam shall be designed to cater demand of 262,000 m<sup>3</sup>/day to accommodate the demand during the dry months.</li> <li>Major benefits that will accrue to farmers when the project is implemented include increased yields from irrigated crops, additional production of crops that are currently not produced and improved Gross Margins and net farm incomes. With the implementation of the project, farmers will also realize increase in incomes both at the farm level and at the scheme level. High incomes will be as a result of increased production and better marketing arrangements.</li> <li>For the project to remain viable at the dam Option the farmers should be encouraged to produce high value crops. Other major benefits that farmers will get include; <ul style="list-style-type: none"> <li>Higher cropping intensity,</li> <li>Growing high value crop such as tomatoes, passion fruits, water melon, etc.</li> <li>Additional irrigation area from the current 900ha to 11,000 ha to satisfy the agroindustry and Biomass power plant raw material supply needs.</li> <li>Domestic water supply for the communities living nearby</li> <li>Tourism attraction</li> <li>Fishing</li> <li>Water sporting</li> </ul> </li> </ul>
6. Project Output Specifications and Performance Standards	<ul style="list-style-type: none"> <li>Provide irrigation water for 11,000ha of land in Kagaari, Kyeni and Gaturi project in Embu County and in Chuka Igambang'ombe irrigation schemes in Tharaka Nithi County.</li> <li>It is along Thuci River in Embu County. The initial works will be to renovate the Weir (Small dam 5mt high in the Mt. Kenya Forest to serve farmers on higher altitudes that will not be reached by the main Dam water supply. Main Dam is 84 m high rock fill dam with a storage capacity of 23 MCM (million cubic meters).Recharge Dam is 60 m high rock fill dam with storage capacity of 20 MCM (million cubic meters).</li> <li>149,500 m<sup>3</sup>/day of domestic water to serve a projected ultimate water demand by 2065.</li> <li>The Power Plant generating 14,483 GWh per year.</li> </ul>
7. Project Duration:	A maximum of Thirty (30) Years as provided for under the PPP Act, 2021. (The final Term shall be as determined in the evaluation and negotiations culminating in the Project Agreement to be signed by the Parties.)
8. Legal Aspects	A comprehensive legal and regulatory framework has been put in place by way of the Public Private Partnership Act, 2013 and the Public Private Partnerships Regulations, 2014. The Act provides for the participation of private sector in the financing, construction, development, operation and maintenance of infrastructure through range of contractual arrangements. In addition, the act provides for the establishment of the PPP Committee as an oversight body and PPP unit as the technical arm of the PPP Committee. The PPP Unit provides technical, financial and legal expertise to the PPP Committee and various Contracting Authorities at both National and County levels of Government in the structuring and implementation of PPP Projects.



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9.	<p><b>Payment Mechanism</b></p> <p>Primary</p> <ul style="list-style-type: none"> <li>- Bulk water supply tariff</li> <li>- hydro power tariff</li> </ul> <p>Others</p> <ul style="list-style-type: none"> <li>- Tourist resort revenue</li> <li>- Carbon credit revenue</li> <li>- Agro-industry revenue</li> <li>- Biomass Power Plant revenue</li> </ul>
10.	<p><b>PPP Delivery Model</b></p> <p>DBFOMT model. Under this model, the private sector partner will be responsible for the design, financing, construction, operation, and maintenance of the infrastructure and associated facilities for a defined period of 30 years, after which the infrastructure will be transferred to the public sector.</p>
11.	<p><b>Environmental and Social Aspects</b></p> <p>A full ESIA study was conducted at the proposed dam location and in the vicinity to identify the positive and negative effects to the environmental and society caused by the development of this dam. Resettlement action planning is a necessity for the project</p> <p>According to the ESIA, the project will bring a number of important positive socio-economic impacts such as; power generation, irrigation, water supply and upgrading of roads, Improved local trade. Moreover, during the construction period employment for local community will increase and the possibility of job skills improvement for young people.</p> <p>The ESIA identified and assessed several impacts on different environmental elements, for each one mitigative measure has been proposed in order to reduce or eliminate the negative effects. The impacts with a high magnitude include: change in hydrological patterns, impeded faunal movement, alteration of aquatic and fish ecology, clearance of vegetation and reduced water regimes.</p> <p>The Environmental Management Plan will ensure that the negative impacts can be controlled and mitigated effectively. Negative impacts of the project are largely compensated by the mitigate and compensatory measures, particularly taking into consideration the large socio-economic benefits that will be obtained by the dam.</p> <p>Environmental Management &amp; Coordination Act of 1999 (EMCA) calls for Environmental Impact assessment (EIA) (under Section 58) to guide the implementation of environmentally sound decisions and empowers stakeholders to participate in sustainable management of the natural resources. Projects likely to cause environmental impacts require that an environmental impact assessment study to be carried out. It is under this provision that the study on Environment and Social Considerations has been undertaken. A report has been prepared for submission to the National Environment Management Authority (NEMA). Study approach &amp; methodology adopted included:</p> <ul style="list-style-type: none"> <li>• Screening and scoping to determine the extent of the project;</li> <li>• Desktop data search and analysis for the baseline bio-physical;</li> <li>• Social environmental parameters of the project area;</li> <li>• Project design approaches to be used; and</li> <li>• Multi-faceted public consultation process which included interviews.</li> <li>• Mitigations have been proposed for the identified negative impacts that include: <ul style="list-style-type: none"> <li>• Noise &amp;Vibrations;</li> <li>• Air quality;</li> <li>• Water quality;</li> <li>• Waste management;</li> <li>• Terrestrial &amp; Aquatic Ecology; and Cultural</li> </ul> </li> </ul>
12.	<p><b>Stakeholder Mapping</b></p> <p><b>The National Irrigation Authority (NIA)</b></p> <p>Provide irrigation support services including technical advisory services in design, administration, operation and maintenance under appropriate modalities</p> <p><b>Embu &amp; Tharaka Nithi Country Governments Role in the project areas:</b></p> <p>The County governments will collaborate with the National Authority to provide capacity building for farmers and support establishment of viable farmer organizations, Irrigation Water Users Associations (IWUAs) to develop and manage irrigation schemes including actively participating in conflicts resolution within irrigation schemes. The County governments will further assist in setting up measures to implement adaptation and mitigation to climate change, and enhance sustainable environmental management to actual the carbon credits initiative.</p> <p><b>Irrigation Water Users' Associations (IWUAs)</b></p> <p>The Irrigation Water Users Associations (IWUAs) will have full responsibility for water supply and distribution, as well as operation and maintenance activities, produce marketing, and linkages. The association will also provide farmers with the chance to be involved in the process of irrigation management.</p>

12	Stakeholder Mapping	<p><b>Community/Farmers:</b></p> <p>The community, farmers and land owners, who are the key beneficiaries of the project are expected to create awareness among general public on the importance of the project, provide security, engage environmental initiatives in tree planting, prepare themselves to enter into contract farming with the investors as community based organizations (CBOs), engage in trading as the local private sector alliance (traders, cooperative societies /farmer organizations) and provide labour force as construction site and factory workers.</p> <p>They will be involved in production support initiatives such as; input supply, agricultural credit, land preparation, agricultural extension, post-harvest handling/storage, processing and marketing services.</p> <p>The County governments will sign cooperative agreements with the investor on management of Municipal Solid Waste (MSW) to be delivered to the Biomass power plant location.</p> <p><b>The National Treasury</b></p> <p>Mobilize and allocate public financial resources for implementation of the as the public representative in this PPP partnership, issue project approvals, guarantee and all contractual agreements required by the proponent for mobilization of private capital for PPP projects.</p>
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### C: DISCLOSURE REQUIREMENTS ON THE SUBMISSION OF PRIVATELY-INITIATED PROPOSALS MINISTRY OF WATER SANITATION & IRRIGATION:

The Proponents namely, the Consortium of Elevolution Engenharia SA (Elevo group - Portugal) and Weihai international Economic & Technical Corporation (WIETC-China) have submitted Thuci Dam Project proposal to be developed at Kagaari, Kyeni and Gaturi project in Embu County and in Igamba Ngombe irrigation schemes in Tharaka Nithi County in two phases;

**Phase 1:** a) Dam construction & Hydro power generation.  
b) Irrigation network

**Phase 2:** Value Addition Developments  
a) Tourist Resort  
b) Carbon Credits Initiative  
c) Agro-industrial Park  
d) Biomass Energy Plant

The Privately Initiated Proposals will be subjected to the PPP procurement process which entails: evaluation of proposals, project development activities, evaluation of the project development report, negotiations and drafting of the project agreement, stakeholder engagements and finally obtaining requisite approvals required under the PPP Act, 2021. Having undertaken the above processes, the PPP Committee will render its decision to the Ministry of Water Sanitation & Irrigation in accordance with the Act. The Ministry of Water Sanitation will abide by the provisions of Section 69 of the PPP Act which requires a Contracting Authority (CA) to publish information relating to the projects upon award. This will be disclosed at the appropriate time upon conclusion of the statutory processes.

### E: NOTICE TO THE PUBLIC:

Project Implementation Proposal (PIP) was received by the Contracting Authority on 26<sup>th</sup> May, 2025 any other private party interested in submitting a similar proposal for the project should express their interest to the Contracting Authority within 21 days from the date of the notice.

In line with the provisions of the PPP Act, 2021, the Circular dated **24<sup>th</sup> April 2025** on Public Disclosure Requirements on PIPs and in line with Government of Kenya's desire for transparency in all its initiatives, this disclosure has been made to notify members of the public of the Privately-Initiated Proposals (PIPs) submitted by Proponents; the Consortium of Elevolution Engenharia SA (Elevo group - Portugal) and Weihai international Economic & Technical Corporation (WIETC- China)

### CONTRACTING AUTHORITY CONTACT DETAILS

**Please provide the following information for the Contracting Authority's contact person for the Project**

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