



# DISCLOSURE ON DEVELOPMENT OF THE THUCHI DAM PROJECT PPP PROJECT INEMBU 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 Thuchi dam project in Embu County.

The proposed Thuchi Dam Project to be built on River Thuchi in Runyenjes Constituency of Embu County, Kenya. 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 16,500 acres (6,600ha) of irrigation land in Kaagari-Gaturi Irrigation project area. 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 was 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 Thuchi dam on River Thuchi 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. 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.

### 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:	Thuchi Dam & Kaagari Gaturi Irrigation Development Project
2. Contracting Authority:	State Department for Irrigation, Ministry of Water, Sanitation and Irrigation.
3. Project Location:	Gaturi North, Kaagari South, Kaagari North, Central Ward, Kyeni North, Kyeni South, Gaturi South, in Embu 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 scheme for irrigation, domestic, institutional and commercial and aqua farming demands. Through the construction of Thuchi Dam, NIA aims to harness, conserve, control and utilize the waters of Thuchi River, in Runyenjes Sub-County of Embu County for provision of water storage and to supply irrigation water for Kagaari Gaturi Irrigation Project.</p> <p>The amount of water required to effectively support the 6,600 ha of Kagaari, Kyeni and Gaturi irrigation scheme was estimated in consideration of the crop, weather and irrigation areas of various climatic zones of the project. 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> <p>On the proposed 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.</p> <p>The dam site is located downstream of the Kagaari, Kyeni and Gaturi irrigation water intake, it can only irrigate phase I and II and about 30% of phase III. It’s proposed that the un- irrigatable upper area of phase</p>

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	<p>III be supplied from the existing Kagaari, Gatari irrigation water intake.</p>
<b>5. Project Need/Benefits</b>	<p>The Project is situated in Runyenjes Constituency whose major part is located in Embu East District. However, some parts of the constituency are found in Embu West and Embu North Districts. The Project is situated in 13 Locations with 38 Sub – Locations. These Locations include; Kyeni Central, Kyeni South, Kyeni East, Kyeni North East, Kyeni North West , Kagaari South East, Kagaari South West, Kagaari North East, Kagaari North West, Runyenjes West Gatari North, Runyenjes East and Makengi.</p> <p>The proposed Thuchi dam is expected to supply all water demands in its designated command area within the confines of Kagaari, Kyeni and Gatari project. These demands shall include irrigation, domestic, institutional and commercial and aqua farming demands. The Table below is a summary of the projected human population in Manyatta and Runyenjes constituencies based on the 2009 census projected at a growth rate of 1.4% to the ultimate design period of 50 years.</p> <p><b>Project population to observed by 2065 is 390,000 people</b></p> <p>The water demand for the proposed project is anticipated to be useful to various beneficiaries as follows;</p> <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> <p>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. The project shall support 6,600ha of irrigation in Kaagari, Kyeni and Gatari Irrigation development project areas when the dam structure shall be in place.</p> <p>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.</p>

	<p>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;</p> <ul style="list-style-type: none"> <li>• Higher cropping intensity,</li> <li>• Growing high value crop such as tomatoes, passion fruits, water melon, etc. <ul style="list-style-type: none"> <li>• Additional irrigation area from the current 900ha to 6600ha</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>
<b>6. Project Output Specifications and Performance Standards</b>	<ol style="list-style-type: none"> <li>1. Provide irrigation water for 6600ha of land in Kagaari, Kyeni and Gatari Irrigation scheme.</li> <li>2. It is along Thuchi River in Embu County. It's an 84 m high rock fill dam with a storage capacity of 23 MCM (million cubic meters).</li> <li>3. 149,500 m<sup>3</sup>/day of domestic water to serve a projected ultimate water demand by 2065.</li> <li>4. The Power Plant generating 14,483 GWh per year.</li> </ol>
<b>7. Project Duration:</b>	<p>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.)</p>
<b>8. Legal Aspects</b>	<p>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 a 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.</p>
<b>9. Payment Mechanism</b>	<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 Revenues</li> </ul>



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<p><b>10. 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>
<p><b>11. 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> </ul>

	<ul style="list-style-type: none"> <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:</li> <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>
<p><b>12. Stakeholder Mapping</b></p>	<p><b>The National Irrigation Authority (NIA)</b></p> <p>Provide irrigation support services including technical advisory services in design, construction supervision, administration, operation and maintenance under appropriate modalities</p> <p><b>Country Government in the project area:</b></p> <p>The County government 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. It will further assist in setting up measures to implement adaptation and mitigation to climate change, and enhance sustainable environmental management.</p> <p><b>Irrigation Water Users' Associations (WUAs)</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> <p><b>Community/Farmers:</b></p> <p>The community/ farmers who are the key beneficiary of the project and land owners, are expected to provide labor where necessary, creating awareness among people on the importance of the project, providing security, and be involved in the formation of a formal farmers' organization. Private sector (traders, cooperative societies/ farmer organizations, factories.)</p> <p>They will be involved in production support including input supply, agricultural credit, land preparation,</p>



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	<p>agricultural extension, post-harvest handling or processing and marketing services.</p> <p><b>The National Treasury</b></p> <p>Mobilize and allocate public financial resources for implementation of the irrigation project that includes approving mobilization of private capital for PPP projects.</p>
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Please provide the following information for the Contracting Authority's contact person for the Project	
Contact Person:	Principal Secretary; State Department for Irrigation
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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 Elevation Engenharia SA (Elevo group - Portugal) and Weihai international Economic & Technical Corporation (WIETC- China)** have submitted Thuci Dam Project proposal to be developed at Runyenjes constituency in Embu 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:**

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 Elevation Engenharia SA (Elevo group - Portugal) and Weihai international Economic & Technical Corporation (WIETC- China)**

**CONTRACTING AUTHORITY CONTACT DETAILS**