

SOCIAL IMPACT ASSESSMENT STUDY

Intake Well, Pump House Construction Project

DRAFT REPORT

Requiring Agency



**Kerala Industrial Infrastructure
Development Corporation**
A statutory Body of Govt of Kerala

SIA Unit

RAJAGIRI *outreach*

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Abbreviations

BPCL	Bharat Petroleum Corporation Limited
CWC	Central Water Commission
CWRDM Management	Centre For Water Resources Development And Management

FACT	Fertilisers and Chemicals Travancore Limited
KEPIP	Kerala Export Promotion Industrial Park
KINFRA Corporation	Kerala Industrial Infrastructure Development Corporation
KSEBL	Kerala State Electricity Board Limited
LA	Land Acquisition
MLD	Million Litres Per Day
MSW	Master Of Social Work
NGO	Non-Governmental Organization
RTFCTLARR	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act
SIA	Social Impact Assessment

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CHAPTER 1 EXECUTIVE SUMMARY

1.1 Introduction - Project and public purpose

Growing urbanisation and industrialisation is being increasing in these eras, which obviously increase the demand for potable water also. With the increasing infrastructure facilities envisaged near Kakkanad, water is bound to be a utility of vital importance. Water will be needed to meet the industrial as well as domestic uses of all the existing and upcoming projects. As per the reports of Kitco Consultants (2016-17) it is estimated that 45 MLD will be required at the area. The existing water supply scheme from Kadambayar will not be sufficient to cater to the upcoming demands of the area. Due to the increasing pollution of the Kadambayar river being contributed by the nearby institutions, the dependency on this particular source is also difficult.

The project is envisaged to meet the water demands for the existing Info Park Phase I, proposed Phase II, BPCL, Smart City, Expansion of Info Park and KSEBL (Brahmapuram Diesel Power Plant).

1.2 Location

The proposed area is located at Ernakulam District, Aluva Taluk, Keezhmad Village at Survey No 45/11 (Dryland) owned by P M Abdul Lahir and Saira Lahiras per the Notification Kerala Gazette, Extraordinary, No 1162 dated 10.03.2017 (Form No 4, Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (Central Act 30 of 2013)).

1.3 Size and attributes of land acquisition

As per the notification mentioned above, 09.19.50 hectare land is proposed to be acquired.

1.4 Alternatives Considered

Kitco consultants had conducted an examination of feasibility of alternatives including Kadambayarriver, Muvattupuzha river, Canal diversion from Bhoothathankettu, LNG Petronet, Fact Canal and Periyar river were considered. Among that Periyar river was considered for the project. Later detailed reconnaissance of two different plots at the banks of Periyar was conducted in order to identify exact location of intake system.

Plot A - Thottumugham, Survey No 48/11 (48.16 cents) & **Plot B** - Thottumugham, Survey No 48/3 (33.19 cents) were the 2 plots from which Plot A was suggested for the project by Kitco consultants.

1.5 Social Impact

While conducting the Social Impact Assessment, SIA team had observed that although there exists an old building in the proposed project area, no one is residing at the area. Whereas the owners of the property has attained permit from Keezhmad Grama Panchayat on 02.02.2017, to construct a 3 storied building at the area. In the case of acquiring the property, the affected family will not be able to construct their planned buildings. Apart from that there shall be no other adverse impacts to ecology, agriculture or related aspects according to the report prepared by Kitco consultants.

1.6 Mitigation Measures

Not Applicable

1.7 Assessment of Social Costs and Benefits

It is assessed that there shall be no visible benefits for the project affected area or to the community. Whereas the project estimates that it shall meet the demand for water at industrial as well as domestic uses of existing and proposed projects at Kakkanadu area. Loss of property for the owner is assessed as the impact, except the same, there shall be no other impacts.

CHAPTER 2 DETAILED PROJECT DESCRIPTION

2.1 Background of the Project

The proposed project is designed to meet the water demand at Kakkanad area for the industrial and related requirements. The project envisages serving the increased demand of water for the existing as well as the proposed industrial projects. Presently many industries including Info Park are depending on Kadambayarriver for their demands such 6.5 MLD is being supplied from the river. It is estimated that the demand will rise to 10 MLD on implementation of Info Park Phase II in 160 acres of land at KunnathunaduTaluk. Proposed Smart City Kerala State's esteemed

project which shall create employment opportunities for 17000 people is estimated a demand of 5 MLD. Industries such as BPCL is estimated a demand of another 5 MLD. Kinфра has allocated 25 acres of land for Electronics industry in future, which is water intensive. Considering the same and also the future expansion of KEPIP, 10 MLD has been allocated.

Table 2.1 Water demand of end users

SI No	End User	Water Demand (MLD)
1	Existing units of KEPIP, Infopark Phase I & II	10
2	Industrial corridor including BPCL etc	5
3	Smart City	5
4	Future expansion of KEPIP, Infopark	10
5	KSEBL, Brahmapuram Diesel Power Plant	15
	Total	45

Considering 23.5 hours pumping time and 5% transmission losses, it is proposed to draw 48.5 MLD water from the intake well site.

Kerala Industrial Infrastructure Development Corporation (KINFRA) is the implementing agency of the project.

2.2 Rationale of the project

The existing water supply schemes will be insufficient to meet the increased water demand for the existing and proposed projects at the Kakkanad area. Increased level of pollutants in the existing source, i.e., Kadambayarriver, is another threat. Proposed project envisage to find a solution for all these problems.

2.3 Details of the project

The proposed project is designed to meet the increased water demands of the existing and proposed industrial projects at Kakkanad area. For the construction of intake well and pump house, it is proposed to acquire the land located at Ernakulam District, AluvaTaluk, Keezhmad Village, at Survey No 48/11 an extent of 00.19.50 hectare. The raw water abstracted

from the intake well is proposed to be pumped to the treatment plant location at KEPIP. From the location of intake well, the pipeline is proposed to be routed through Edayapuram - NAD - Thevakkal - Thengodu - Edachiraroad totaling to around 15 km length.

2.4 Alternatives considered

Kitco consultants had examined the feasibility of 6 different sources and among that Periyar was considered. The details of the sources examined are as follows:

2.4.1 Kadamprayar River

Kadamprayar is a small stream having a total catchment of 115 sq km and a length of 50 km flowing abutting the park. Based on CWRDM report, the river shall be inadequate to meet the present and future water demand

2.4.2 Muvattupuzha River

The river, major part is used for agricultural and related purposes has a total catchment area of 1110 sq km. The river is a source for several water supply schemes, to a large number of commercial and household users in the districts of Idukki, Ernakulam and Alappuzha.

2.4.3 Canal Diversion from Bhoothathankettu

An artificial reservoir need to be constructed and 25-30 km pipeline has to be laid, which will incur huge cost for the project.

2.4.4 LNG Petronet

Considering the investment for storage, treatment and polishing of condensate water from LNG process, the reliability of the source is questionable. Moreover, Vypin being an area of water scarcity, the condensate water if produced has to be utilised there itself.

2.4.5 FACT Canal

FACT is satisfying their water demands by drawing water from an artificial lake into which an irrigation canal from Kadamprayar watershed has been diverted. Due to the scarcity of water, flow into the canal will be intermittent.

2.4.6 Periyar River

Based on the report prepared by Centre for Water Resources Development and Management (CWRDM) in 2008 the availability of water in Periyar is analysed as follows:

The Central Water Commission (CWC), Government of India has a stream gauging station at Neeleswaram in river Periyar. The already committed water withdrawal including current and future is found to be 1020 MLD. After taking this into consideration, the dependable daily discharge data shows a minimum of 1.37 Mm³ (1370 MLD) and maximum of 35.74 Mm³ (35740 MLD). Moreover during dry season there was a requirement to discharge about 1728 MLD to control the salinity intrusion in river Periyar. A regulator cum bridge is already constructed at Manjummel as well as in Pathalam thus discharge can be saved and utilised. So 34 MLD drawal to KEPIP may not affect the ecology of river Periyar in any harmful way and also any hindrance to all the already committed water withdrawals both current and future. Hence, this source can be considered for the proposed scheme.

2.5 Project area - Alternatives

For accommodating the intake well cum pump house, transformer and other related facilities approximately 40 cents of land is required, preferably at the banks of Periyar with 25-30 meter water frontage.

The details of two different plots examined by Kitco consultants for the proposed are given below:

Plot A

The Plot A is at a distance of approximately 110 meters away from Thottumugham Bus Stop in Aluva - Perumbavoor Road. The extent of Plot A is 48.160 cents with Survey no 48/11 part.

Plot B

The Plot B is at a distance of approximately 110 meter away from Thottumugham Bus Stop in Aluva - Perumbavoor Road. The plot lies in abutting the Peringatt Road, Thottumugham and Periyar River on west side. It has an extent of 33.910 cents with Survey No 48/3 part.

The two plots identified have the following advantages:

- The plots are located at the bank of Periyar river
- Approach road is available to these plots, which is at close proximity to the Aluva - Perumbavoor Road
- Since the approach road is private, obtaining approval for laying pipeline is comparatively easy
- Electricity connection can be availed from nearby 11 Kv line.
- Newly identified location is approximately 16 km from KEPIP

Comparative analysis

The area required for the project is 40 cents, in Plot B only 33.91 cents are available which is inadequate. Plot A has an extent of 48.16 cents which meets the requirements of the project. Moreover 25-30 meter frontage is available at Plot A. Considering the above facts Kitco consultants suggested Plot A for the project.

CHAPTER 3

STUDY APPROACH AND METHODOLOGY

3.1 Background

As per the Notification No.C4-31211/2015 dated 01.12.2016, Ernakulam District Administration has selected RAJAGIRI outREACH as the SIA Unit to study the Social Impact Assessment on the land acquisition for construction of intake well and allied structures for pump house for improvement of water supply toKakkanadIndustrial area.

Sl.N o	Name	Qualification and Designation	Experience
1	Meena Kuruvilla Director Rajagiri outreach	MSW, Chairperson - SIA Unit	30 years in development sector
2	Princy Jacob	MSW, Project Co-ordinator SIA Unit	21 years in development sector
3	Ranjith K U	DSS, Research Associate - SIA Unit	23 years in development sector
4	Sujith Narayanan	MA Sociology, PGDHS	9 years in

		Research Associate - SIA Unit	development sector
5	Arun Mathews George	MSW, Research Associate - SIA Unit	9 months in development sector

3.2 Study Approach

The land proposed to be acquired for the project is owned by Mr P M Abdul Lahir and Mrs Saira Lahir, Raziya Villa, Thainoth Road, Aluva. The said land an extent of 48.16 cent is located at Survey No 48/11 Keezhmad Village, Aluva Taluk.

Since the owners are residing in a foreign nation, SIA team has conducted discussion with the legal representatives of the affected family. The representatives had intimated that the affected family is not willing to surrender their property.

3.3 Methodology & Tools

Not Applicable

3.4 Sources of data collected

- a) Office of the Special Tahsildar (LA), NH II, Aluva
- b) KINFRA Office, Kakkanad, Ernakulam

3.5 Process and Schedule of Activities

3.6 Process and Schedule of Activities

- 01.12.2016 - District Collector, entrust RAJAGIRI outREACH to conduct the SIA study
- 03.06.2017 Publication of 4 (1) notification in Kerala Gazette
- 31.05.2017 - Discussion with legal representatives of affected family
- 01.08.2017 - Propose to conduct Public Hearing

CHAPTER 4

LAND ASSESSMENT

4.1. Information about affected area

The land proposed to be acquired for the project is owned by Mr P M Abdul Lahir and Mrs Saira Lahir, Raziya Villa, Thainoth Road, Aluva. The said land an extent of 48.16 cent is located at Survey No 48/11 Keezhmad Village, Aluva Taluk. Although an old structure is situated at the area, the same is not occupied.

4.2. Area of impact

The proposed land acquisition shall affect the property owner losing of their property extending 48.16 cent.

4.3. Land requirement for the project

For accommodating the intake well cum pump house, transformer and other related facilities approximately 40 cents of land is required, preferably at the banks of Periyar with 25-30 meter water frontage.

4.4 Previous transactions in the area

Not Applicable

4.5 Land(if any) already purchased, alienated, leased or acquired, and the intended use for each plot of land required for the project

Not Applicable

4.6 Quantity and location of land proposed to be acquired for the project

The Plot is at a distance of approximately 110 meters away from Thottumugham Bus Stop in Aluva - Perumbavoor Road. The extents of Plot A is 48.160 cents with Survey no 48/11 part.

4.7 Nature, present use and classification of land and if agricultural land, irrigation coverage and cropping patterns

The proposed land is Dry land, not using for agricultural or related purpose.

4.8. Size of holding, ownership patterns, land distributions and number of residential Houses

The extent of land is 48.16 cents, information regarding ownership pattern are not available. Although an old building exists in the area, the same is not used for residential purpose

4.9. Land prices and recent changes in ownership, transfer and use of lands over the last 3 years

Information regarding the same is not available

CHAPTER 5 ESTIMATION AND ENUMERATION

5.1 Families which are directly affected

Mr P M Abdul Lahir and Mrs Saira Lahir, land owners of the proposed project area shall be considered as directly affected by the project.

5.2 Families which are indirectly impacted by the project

There are no families indirectly affected by the project.

5.3 Inventory of productive assets and significant lands

No economic activities are being held at the affected area.

CHAPTER 6

SOCIO ECONOMIC AND CULTURAL PROFILE

6.1. Demographic details

No persons are residing or operating in the proposed project area. Detailed information about the land owners are not available

6.2. Income and poverty level

Affected family of P M Abdul Lahir is a Non Resident Indian, detailed information are not available.

6.3. Vulnerable groups

Not Applicable

6.4. Land use and livelihood

Not Applicable

6.5. Local economic activities

Not Applicable

6.6. Factors that contribute to local livelihoods

Not Applicable

CHAPTER 7 SOCIAL IMPACT MANAGEMENT PLAN

7.1 Approach to Mitigation

Not Applicable

7.2 Measures to avoid, mitigate and compensate impact

Not Applicable

7.3. Measures that are included in the terms of Rehabilitation and Resettlement

Compensation as outlined in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 shall be provided to the affected family.

7.4. Measures that the Requiring Body has stated it will introduce in the Project Proposal

No mitigation or any other measures were stated by the Requiring Body in the Project Proposal

7.5. Alterations to project design and additional measures that may be required to address the extend and intensity of impacts across various groups as identified during the Social Impact Assessment process

Not Applicable

7.6. Detailed Mitigation Plan

Not Applicable

CHAPTER 8

SOCIAL IMPACT MANAGEMENT PLAN INSTITUTIONAL FRAMEWORK

8.1 Institutional Structures and Key Persons

RTFCTLARR Act, 2013 defines the Administrator appointed by the State Government would be the person responsible for Preparation of Rehabilitation and Resettlement Scheme for affected families of Land Acquisition. Subject to the superintendence, directions and control of the appropriate Government and the Commissioner for Rehabilitation and Resettlement, the formulation, execution and monitoring of the Rehabilitation & Resettlement Scheme shall vest in the Administrator.

In the proposed Intake Well and Pump House Construction Project, the major mitigation measures from the acquisition can be handled by providing the appropriate compensation under the RTFCTLARR Act, 2013.

As per G.O. (Ms) No.485/2015/RD, dated 23/09/2015, The Kerala State Policy for Compensation and Transparency in Land Acquisition,

The District Level Fair Compensation, Rehabilitation and Resettlement Committee comprising

- District Collector, Administrator for resettlement and rehabilitation,
- Land Acquisition officer,
- Finance Officer,

- Representatives of the requiring body to take financial decisions on its behalf,
- Representatives of Local Self Government Institution will monitor the Rehabilitation Action Plan.

CHAPTER 9

SOCIAL IMPACT MANAGEMENT BUDGET AND FINANCING OF MITIGATION PLAN

9.1. Costs of all resettlement and rehabilitation costs

Not Applicable

9.2. Annual budget and plan of action

Not Applicable

9.3. Funding sources with breakup

Not Applicable

CHAPTER 10
SOCIAL IMPACT MANAGEMENT PLAN MONITORING AND
EVALUATION

10.1 Key Monitoring and Evaluative indicators

Not Applicable

10.2 Reporting mechanisms and monitoring roles

Not Applicable

10.3 Plan of independent evaluation

Not Applicable

CHAPTER 11

ANALYSIS OF COSTS AND BENEFITS AND RECOMMENDATION ON ACQUISITION

Since no persons are residing /operating in the project affected area, there shall not be any rehabilitation necessary for the project. The project when completed will cater to the needs of nearly 5 lakhs employees in industrial establishments, produce 400MV power for KSEBL and to the state and will produce nearly Rs 2000 crore worth Industrial products in a year. The project is treated as framed for a public purpose under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013) Section 2 (i)(b)(iii). It is in this base, Government of Kerala notified to initiate acquisition procedure. Considering the public advantage and interest and treating as an inevitable need, the project has to be implemented.