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**Proposal for**  
**INTEGRATED DEVELOPMENT OF**  
**INLAND FISHING VILLAGES**



*Government of Kerala*  
*Kerala State Coastal Area Development Corporation Ltd*  
*(A Govt. of Kerala Undertaking)*

**April 2012**

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**Table of Contents**

I.	INTRODUCTION.....	4
II.	PROPOSED PROJECT.....	8
III.	FINANCIAL DETAILS.....	11
IV.	PROJECT MANAGEMENT ARRANGEMENTS.....	12
Detailed Table of Contents		
I.	INTRODUCTION.....	4
A.	General Profile.....	4
B.	Inland Fishery Scenario.....	4
C.	Challenges in Inland fishery sector.....	6
D.	Project Need.....	7
II.	PROPOSED PROJECT.....	8
A.	Housing.....	8
B.	Sanitation.....	9
C.	Drinking water facilities.....	9
D.	Alternate livelihood.....	10
E.	Social Infrastructure.....	10
F.	Community Motivators.....	10
III.	FINANCIAL DETAILS.....	11
IV.	PROJECT MANAGEMENT ARRANGEMENTS.....	12
A.	Implementing Agency-Roles and Responsibilities.....	12
B.	Project Implementation Schedule.....	13

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C. Project Partners.....	14
D. Capacity building plans.....	15
E. Financial Management Arrangements.....	15
F. Procurement Arrangements.....	16
G. Transparency and Accountability.....	18
H. Environmental and Social safeguards.....	18
I. Operation and Management.....	18
J. Monitoring and Evaluation.....	19
K. Reporting.....	20
L. Conclusion.....	20

**List of Tables**

Table 1. District wise break-up of inland fishermen population.....	5
Table 2. Details of houses in inland sector.....	9
Table 3. Financial Abstract.....	11
Table 4. Financial requirement.....	12
Table 5. Project Calendar.....	14
Table 6. Line departments associated with each sector.....	14

**List of Annexure**

Annex 1 List of Inland Fishing Villages selected under the scheme.....	21
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**I. INTRODUCTION**

**A. General Profile**

1.1 Kerala, nicknamed as “God’s own country” is a land of mesmerizing beauty. With its sun bathed golden seashores edged with abundant coconut trees, the zigzag rocky terrain of the Western Ghats, straggling plantations and paddy fields, the cerulean lagoons and the bountiful rivers and mighty waterfalls, the State has a fascinating bio-diversity of flora and fauna.

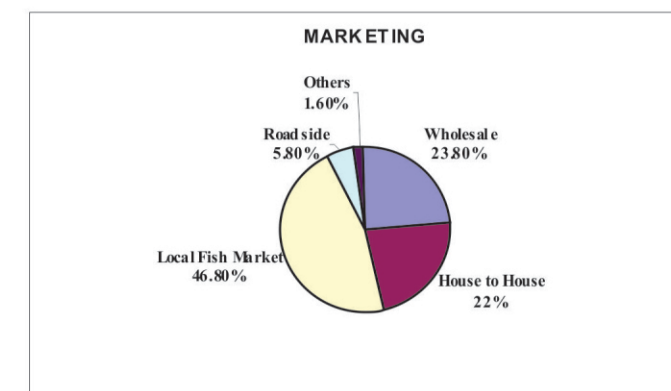
**B. Inland Fishery Scenario**

1.2 Kerala is bordered by a range of mountains viz. the Western Ghats on the eastern side and the Arabian Sea on the western side. One of the inimitable feature of the State is the 49 interconnected backwaters (Kayals), 44 major rivers originating from the Sahyadri hills (41 are west flowing and three east flowing), 9 fresh water lakes, 53 numbers of reservoirs, innumerable irrigation tanks, tanks, streams, waterfalls, private and public ponds, quarry ponds including coastal low lying areas like Pokkali fields, Kole lands and Kaippad field that lie between the Arabian Sea and Western Ghats. The rivers have an area of 0.85 lakh ha and a reservoir covers about 0.43 lakh ha. The high land area of the state also has a specialty of the cold-water resource. Thus, the State is endowed with a total fresh water area of about 1.61 lakh ha and a total brackish water area of about 2.43 lakh ha.

1.3 Estuaries and backwaters have saline waters and only those fishes, which can withstand changes in salinity, thrive best. The brackish water fishery resources consist of 75 species of which 57 species are from fish, 6 species of shrimp, 1 species of prawn, 5 species of crabs and 6 species of bivalves, 28 species were identified as commercially important. Some species of sardine and anchovies, mullets, catfishes, perches, pearl spot, prawns, oysters, mussels, crabs and clams are the most common.

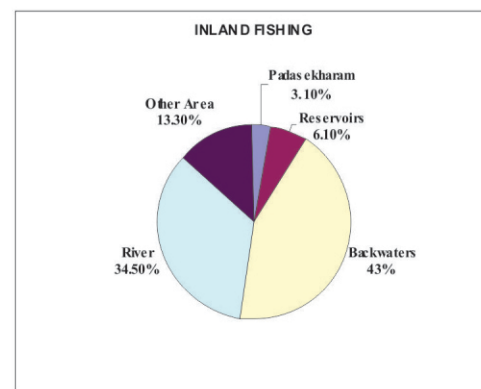
1.4 The rivers, rivulets, streams etc., originating from the Western Ghats are well known for their richness of biodiversity of fresh water fish species. Altogether 210 primary fishes (excluding the marine migrants) are found in the inland waters, of which 53 species are endemic. Majority of these fish species have ornamental value also. Today the Western Ghats is recognized as one of the 25 “biodiversity hotspots” in the world.

1.5 The Inland fish production provides a significant contribution to the animal protein supplies in the rural interiors areas of the State. Most of the inland production is consumed locally and marketed domestically. Its utilization details is given below,



1.6. The inland fish production including aquaculture during the year 2008-09 was estimated to about 1.03 lakh metric tonnes which accounts for a value of Rs.75778.87 lakh.

1.7. The total population of fisher folk, who earn their livelihood from the inland waters of the State, comes around 2.54 lakhs, which accounts 0.68% of the State's total population. The active fishermen of the inland sector are estimated as 37908 lakh belonging to 34997 households. It is a notable fact that unlike marine sector, the females of inland sector also involves in fishing. About 5400 females are seen in active fishing by hand picking and using 'ottal', a type of small basket to trap fish. The dependency of water body for fishing is given below,



1.8. The active inland fishermen inhabit in 108 fishing villages spread over the 12 districts of Kerala. District wise details of total number of fishermen and active fishermen is furnished in the below table.

**TABLE 1**  
**DISTRICT WISE BREAK UP OF INLAND FISHERMEN POPULATION**

Sl. No.	Name of District	No. of Inland Fishing Villages	Total No. of Fishermen	Active Fishermen	Active Fisher women
1	Thiruvananthapuram	4	1454	-	-
2	Kollam	26	37019	7647	1177
3	Pathanamthitta	3	2468	310	21
4	Alapuzha	24	66752	11838	1153
5	Kottayam	8	26798	4772	1572
6	Idukki	1	843	162	-
7	Ernakulam	15	68741	6571	792
8	Thrissur	8	21336	1154	113
9	Palakkad	2	2795	454	-
10	Malappuram	6	4644	1515	122
11	Kozhikode	8	12856	1798	24
12	Wayanad	1	292	-	-
13	Kannur	5	6982	1271	416
14	Kasaragod	2	1014	416	87
	<b>TOTAL</b>	<b>113</b>	<b>253994</b>	<b>37908</b>	<b>5477</b>

1.9. In the inland sector, only non-motorized/ traditional type of vessels is operated. Small Plank built canoes and dug out canoes are the common crafts. Catamarans were occasionally operated in the backwaters of Kollam district. Cast netting, Drag netting, Gillnetting, Crab trapping, dive fishing, clam fishing, oyster fishing, line fishing etc, are practiced with these crafts.

### C. Challenges in Inland Fishery Sector

1.10. Public and Private encroachments has enormously increased resulting in shrinkage of the backwaters in an unprecedented pace. Due to the irrational filling of the inland waters for purposes like construction of tourist destinations, industrial units and city modifications, an original area of 2,22,000 hectare of back waters is now reduced to 56000 hectare. The results in **annihilation of the habitat** of the millions of flora and fauna that inhabit the inland waters, which in turn reflects in the income generation of the poor inland fishermen. Along the edges of backwaters of the state, are the tolerant marshy vegetation comprising trees and shrubs, adapted to thrive in shallow, muddy, salt and brackish waters. The canals, creeks and the estuarine environment provide home for a wide variety of aquatic fauna and the arid zone forms the nesting grounds for many aquatic birds. Mangroves also forms the breeding and nursery grounds for the larvae and juveniles of commercially important species of prawns, fishes and molluscs. Mangroves serve as the most productive eco-system that in fact makes it possible for the human to live an amply endowed life. Mangroves provide fishermen food to eat, timber to cook and most importantly shade against nature's fury. They turn sea water into better tolerated brackish water and trap nutrients brought down by rivers; they act as recyclers of pollutants and prevent erosion and silting of the channels. Dwindling of the backwaters and the expansion of tourism activities has resulted in ample reduction of mangroves throughout the inland areas ensuing destruction of the breeding and feeding ground of the inland species ending up in **reduction of recruitments and replenishment** of the fauna and flora ending up in cutback in available fish species.

1.11. Agriculture sector requires a sizeable amount of pesticides (roughly 656.5 tonnes per annum), of which fungicides account for 73%. Pesticides are also used to control weeds on pavements and along railway lines. Intensive cultivation of crops causes chemicals from fertilizers (e.g. nitrate) and pesticides to seep into the open water. The textile industry uses pesticides to stop insects attacking carpets or clothing, and timber is treated with pesticides to help it last longer. All these pesticides and the harmful substances used, in one way or the other end up in the different aquatic habitats. This results in breaking out of different deadly diseases among the fishes resulting in heavy losses. The negative impacts of rise in usage of pesticides are a deathblow on the fishermen population in general, and particularly on the inland sector. Its consequences were evident from 1991 onwards when a deadly fish disease EUS (Epizootic Ulcerative Syndrome) spread out through out the inland fishing sector. It is disease, which destroys the immune system of the fish. The public stopped buying fish, which led to acute poverty and starvation in the fishing community. During such periods Fishermen even committed suicide, depend on the middlemen and moneylenders for survival and end up in an eternal debt trap.

1.12. Another serious menace to the inland areas is the rise in Industrialization, and the consequent aquatic pollution. Waste water from manufacturing or chemical processes in industries contributes to water pollution. Industrial waste water usually contains specific and readily identifiable chemical compounds. During the last 40 years, the number of industries has grown rapidly. But, water pollution is concentrated within a few sub sectors, mainly in the form of toxic

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wastes and organic pollutants. Out of this a large portion can be traced to the processing of industrial chemicals and to the food products industry. Most major industries have treatment facilities for industrial effluents. But this is not the case with small-scale industries, which cannot afford enormous investments in pollution control equipment as their profit margin is very slender. This ultimately result is the total contamination of water quality thereby destroying the aquatic life.

- 1.13. The inland fishermen family of Kerala secondarily depends on either on Paddy cultivation, or coir making for their livelihood. Due to various reasons like shortage of fiber, environmental degradation, introduction of mechanization program make the traditional coir sector in heavy loss. Considering paddy cultivation, due to the increase in production cost and decrease in profit, more and more people are not getting into Paddy cultivation. This resulted in migration of entire work forces into the inland fishing sector which created more competition in inland.
- 1.14. Urbanization is yet another reason for the poor development of inland sectors. As long as human intervention remained minimal, the ecosystem, through its all-encompassing balancing nature, was self-cleansing. But the development demands that determine the choice of the paths upset the natural harmony. Infrastructure development activities destroyed extensive tracts of coastal vegetation thereby upsetting the entire complex ecology; rapid urbanisation encroached into the rich and luxuriant mangrove forests, while industrial development not only caused pollution but prevented any regeneration possibilities as well; modern shrimp farms brought in the final onslaught – the irreversible destruction of inland waters. Inland areas with its high density of population cannot bear such onslaughts any longer.
- 1.15. Backwaters, rivers and even the seas are the ultimate reservoirs of wastes generated by the modern civilization. Lack of facilities for monitoring the aquatic pollution is becoming a severe threat, which may pose hazards to the aquatic living resources. The non-biodegradable pollutants alter the aquatic eco-system to a considerable extent. The most serious anthropogenic alterations that take place in the inland waters are their alarming reduction of its original area. Also the vertical shrinkage of backwaters by siltation and progressive shallowing of backwaters have rendered them to 35% of original depth.

#### **D. Project Need**

- 1.16. Although, Kerala boasts of the highest quality of life in the country as measured by human development indicators, it is a fact that the State's fishing community both marine and inland has largely been left out of the general development experience. Traditional fisher folk who had no other employment option suffer a lot and as a community they continue to lag behind the rest of the State in all areas of development. Inland fishing sector since 1970 has remained more or less in a stagnant position with out any development. The fishermen community could not be sidelined, as this sector gives the cheapest source of protein among the deprived section of the society. This marginalization poses a challenge to the notion of Kerala being a "model of development". It is responsibility of the State to provide urgent basic needs such as shelter, drinking water and alternate employment.
- 1.17. All the above mentioned situations have made the inland sectors stagnant since 1970s, in the development scenario. Hence it is high time to intervene in the sector and to bring the poor fisher folk to the mainstream of the society. In order to address these challenges, new strategies are proposed in integrated development of the inland fishing villages as a whole.

## **II. PROPOSED PROJECT**

- 2.1. Analysis of the existing situation in the household specific and community specific socio-economic condition reveals that it is high time to address these issues in a holistic manner. Considering the spatial dimensions and acuteness of the problems in the fishing villages, Special Area Development programme interventions in priority sector on an integrated, decentralized and demand responsive approach is essential.
- 2.2. The main **objectives** of the projects are
- ✦ To provide safe drinking water to all coastal inhabitants through comprehensive drinking water supply sub projects.
  - ✦ To ensure a safe shelter and other basic amenities to all inland fishermen households of Kerala who reside in hut or shed.
  - ✦ To provide total and comprehensive sanitation facilities to the coastal inhabitants and there by ensure 100% sanitation.
  - ✦ To provide alternate livelihood opportunities to earn daily food.
  - ✦ To provide essential social infrastructure facilities.
- 2.3. Regarding **beneficiaries** of the project, fisher folk will be the direct beneficiaries and other inhabitants of the fishing village will be benefited indirectly. The project is primarily focused on improvement of life of poor traditional fishermen. For the individual sector components like housing, the existing huts/shed dwellers will be the beneficiaries. For Individual latrines the priority shall be provided to the real sufferers. To be identified as a beneficiary, the individual shall be active as fisherman in the age group of 18-60, registered with Kerala Fishermen Welfare Fund Board, and shall be a resident of a fishing village, living with family. For the Community based projects like drinking water, Fisheries infrastructure etc, it will not be possible to limit the benefit to fishermen community alone, but they shall be the primary beneficiaries.
- 2.4. There are no active fishermen in the 5 inland fishing villages of Thiruvananthapuram and Wayanad districts. Anappuzha fishing village has already been selected as a Model fishing village under 13th Finance Commission Award. Hence, **geographical area** of the project shall be the other 107 fishing villages of the State. The list of 107 villages is annexed (Annexure 1). It shall be strictly followed that the project area falls within the boundary of the selected inland fishing village.
- 2.5. The **stake holders** shall be the beneficiaries, the fishing community Local Self Governments, Line departments, Fisheries Cooperatives, Fishermen trade unions, NGOs etc.
- 2.6. The Sector wise details of the proposed project are as follows.

#### **A. Housing**

- 2.7. Housing is a critical and the most wanted requirement of the present and growing coastal population. The poor habitat conditions of the fishing communities bear testimony to their pathetic living conditions. Hence, fulfilling the need for rural housing and tackling housing shortage particularly for the poor fisher folk is an important task to be undertaken on priority. Considering this acute problem, it is proposed to ensure all fishermen families in the inland fishing villages area are provided with a decent shelter of reasonable size. It includes construction of new houses for hut/shed dwellers. Details of housing pattern is given below,

**TABLE 2. DETAILS OF HOUSES IN INLAND SECTOR**

Sl. No.	Housing Pattern	No
1	Huts	3991
2	Home covered with Wooden Planks	1723
3	Home constructed with earthen bricks	14044
4	Good houses	15149
	<b>TOTAL</b>	<b>34997</b>

2.8. Along the 112 inland fishing villages of Kerala, out of the total 34997 households, 3991 are living in huts and 1723 are living in room covered by wooden planks. For these, 5714 households, there is pucca houses requirement with basic amenities like multipurpose room, bed room, kitchen and toilet. The area of proposed building will vary from 340-360 square feet. Unlike marine sector, land is not a problem, leave on 55% of total house holds possess land above 5 cents.

2.9. A single common design is developed for the houses throughout the State, but the foundation design may vary from place to place. The houses will have one multi purpose room with a carpet area of 3m x 2.7 m, a bed room of 2.7 x 2.7 m, kitchen of 2.1m x 1.5 m & a toilet of 1.2m x 1.2 m. Facility for waste treatment and provision for further extension of the house if needed is also included in the plan. The unit cost will be 3.60 lakh and hence the financial requirement for housing will be Rs.205.70 Crore.

#### **B. Sanitation**

2.10. Sanitation problems are found to be more complex in inland fishing village areas. It is surveyed that 4315 house holds has no toiletry facilities, of which 4054 depends on open space. To prevent the contamination of surrounding, banks and waters, it is proposed to provide prefabricated septic tanks along with individual toilet facilities to 4315 households for which an amount of Rs. 4.32 Crore will be required. The unit cost will be Rs.10,000.

#### **C. Drinking Water facilities**

2.11. Most of the inland fishing villages are covered by water, but there will not be water for drinking. 41.6% has own facility for drinking water provision, 24.7% depends on public water supply facilities such as public tap, Panchayath well etc, 33.7% have to depend on neighbors for drinking water. It is estimated that 4382 inland fishermen households are facing severe drinking water scarcity and brought it from more sources beyond 2 Km. They directly use water from open waters for uses other than domestic purposes. 18468 inland fishermen house hold depends on public pipe water supply, of which 3653 house holds faces shortage of water, as water supply on only intermittent.

2.12. Issues of drinking water facility improvement are slightly complicated. To address this serious and complicated issue of drinking water scarcity, manual pumps, over head tanks, pipe line extension cum pipe line replacement, well construction, desalination etc are proposed to be constructed in each area depending upon the requirement. An amount of Rs.30.00 Crore will be sufficient for the same.

#### **D. Alternate livelihood**

2.13. The over all decline in availability of fish from the inland waters and the limited scope due to drastic reduction in water spread area and mangroves along with aquatic pollution, limits the future opportunities for inland fishing. Due to the reduction in catch for marketing, the women member is also facing under employment, who otherwise would have involved in fish marketing.

2.14. Even though the prospect of inland fishing sector is on decline, Aquaculture sector has shows great positive growth. But, the benefit of aquaculture is mostly enjoyed by non-fisher community. Hence, it is high time to shift the benefit of coastal aquaculture to fishermen, so that they could earn an additional income other than through fishing.

2.15. Under the present project, it is proposed to assist 20000 number of fishermen households residing in the inland fishing villages having entrepreneurship competency, with a maximum subsidy assistance of Rs. 0.50 lakh each for supporting to find alternate livelihood from coastal aquaculture activities. The total financial requirement will be Rs. 100 crore.

2.16. The alternate livelihood activities may be based on:

- Mussel/clam/oyster farming,
- Crab fattening,
- Shrimp farming,
- Ornamental fish culture,
- Cage farming of fin fishes, etc

#### **E. Social infrastructure**

2.17. The inland fishing villages of the state are often victims of the nature's fury. They are frequently prone to tidal inundation and flood resulting in loss of their shelter and household properties. This becomes more severe during the monsoon season. So proper measures for mitigating the inundations have to be considered seriously in the inland areas. For this the social infrastructure of the inland fishing villages of the state has to be strengthened and maintained. Bunds, inland roads, drainage systems, culverts, small bridges etc have to be constructed wherever needed. An amount of Rs. 75 crore is required for the same.

#### **F. Community motivators**

2.18. One of the most important factors to ensure a successful outcome for the integrated development projects is a high level of participation in the planning and implementation process. The field level officer in each of the field sites is critical in facilitating the process. Hence for the implementation of the scheme in a very successful way and for the sustainability of the developments in the future, it is obligatory to have someone who can coordinate and motivate the local inhabitants. These field level officers known as "Community Motivators" act as a principal catalyst and co-ordinator of community based activities. The Community motivators will be a full time assistance provider to the introvert coastal inhabitants. They will be easily accessible for any sort of help in the area, different awareness campaigns and motivational programmes will also be organised in the area. It is also important that an exit strategy be developed so that communities do not become dependent on the motivator. The community shall be empowered to manage on their own, and their capacity

developed to sustain management independently or with minimum outside assistance.

- 2.19. The Motivators will be selected by KSCADC for a period of five years on contract basis. They will be provided special training in a range of knowledge and skills including marine ecology and community development.

### III.FINANCIAL DETAILS

- 3.1. Financial requirements for the infrastructure development of 107 inland fishing villages will be Rs.415.02 Crore. An amount of Rs.7.94 Crore is budgeted to meet the expenditure connected with 107 community motivators towards honorarium and travelling expenses and Rs.12.68 Crore as Project Management Expenses. Financial abstract of each sector is furnished below,

**Table 3. Financial Abstract**

Sl. No.	Sector	Amount in Crore Rs.
1	Housing	205.70
2	Sanitation	4.32
3	Drinking water supply	30.00
4	Alternate livelihood	100.00
5	Social Infrastructures	75.00
6	Community motivators	7.94
7	Project Management Expenses	12.68
	<b>TOTAL</b>	<b>435.92</b>

- 3.2. Annual financial requirement will be as follows,

**Table 4. Financial requirement**

Financial Year	Amount (Rs. in Crore)
2012-13	2.00
2013-14	100.00
2014-15	134.00
2015-16	100.00
2016-17	100.00
<b>TOTAL</b>	<b>436.00</b>

### IV. PROJECT MANAGEMENT ARRANGEMENT

- 4.1. The implementation arrangements for the proposed Project have been worked out considering the socio-economic conditions of Kerala, and success in implementing similar kinds of projects in the past. The Government of Kerala (GOK) proposes to strengthen the overall infrastructural facilities of the coastal areas of Kerala under the reform approach.
- 4.2. The Project, under the new approach, seeks to transform KSCADC from 'provider' to 'facilitator and partner'. Accordingly, the Project will capacitate Fishing villages to be primary management units.
- 4.3. The present project will facilitate improvements in housing, sanitation, electrification, drinking water, health, fisheries infrastructure, social infrastructure and Coastal protection activities. In short, the KSCADC will strengthen itself—in engineering and participatory management skills—to be a leader in Special Area Development. The KSCADC will prepare detailed sub project reports with plan, estimate and structural design as per the prevailing Schedule of Rate approved by State Government.

#### A. Implementing Agency-Roles & Responsibilities

- 4.4. The key institution responsible for Project implementation is Kerala State Coastal Area Development Corporation Limited. Its Director Board is responsible for all the activities pertaining to project management. The present Director Board member are all officials includes, Hon'ble Minister for Fisheries as Chairman, Principal Secretary (Fisheries), Finance Secretary (Expenditure), Secretary (Planning & economic affairs), Director of Fisheries, Executive Director, National Fisheries Development Board and its Managing Director as members. Corporation will ensure participation of all line departments like Kerala Water Authority, Kerala State Electricity Board, Public Works Department, Irrigation, Local Selt Government Department etc and various NGOs concerned for the effective and time bound implementation of the proposed project.

4.5. KSCADC, a fully government owned corporation will be responsible for implementation of present project. The KSCADC will provide state-wide leadership and ensure that the Project's development objectives are achieved timely and efficiently. The KSCADC will henceforth undertake the following roles:

- Overall programme management for improved and sustainable developments of coastal areas of Kerala, including monitoring and evaluation of activities, outcomes and impacts.
- Support the development and management of existing common infrastructure, with improved financial and operational performance.
- Planning and construction of the integrated project with active participation of user groups, LSGs and line departments.
- Arranging social, technical, management and capacity building support to LSGs, line departments, community-based organizations and beneficiary groups

4.6. In addition to overall programme planning and management, the KSCADC will be responsible for:

- setting up and guiding the functioning of the Regional Project Management units.
- consolidation of annual work plans;
- consolidation of periodic progress reports;
- liaison with GOI, GOK, the funding agencies etc;
- financial management and audit;
- human resource development, including hiring of specialists;
- fund flow management and fund releases;
- state-level campaigns;
- procurement of goods, works and services
- overseeing implementation of the environmental management framework;
- knowledge management;
- water resources planning and management;
- monitoring, learning, impact evaluations and MIS; and
- quality control of works and processes.

The Project Management team will keep the Director board informed of the key activities and progress of the Project.

#### B. Project implementation Schedule

4.7. The Project will be implemented in the 12th five year plan period itself starting from 2012-13 to 2016-17. The Project calendar is shown below:-

**Table 5. Project Calendar**

Project Activities	2012-13	2013-14	2014-15	2015-16	2016-17
Project planning					
Preparation of DPR for each sub-project					
New house, replacing existing kutcha houses					
Sanitation					
Drinking water					
Alternate livelihood					
Engagement of Community motivators					
Project Management					

#### C. Project Partners

4.8. Some of the key departments shall be partnered for the implementation of the project; line departments associated with each sector shall be consulted and incorporated in each step of implementation for an effective and successful execution.

**Table 6. Line Departments Associated with each sector**

Sl No	Sectoral activities	Departments to be associated
1	New House, replacing existing kutcha houses	Fisheries department/ Local Self Governments /Housing board
2	Sanitation	Local Self Governments/ Suchithwa Mission
3	Drinking water	Kerala Water Authority/Local Self Governments
4	Alternate livelihood	Fish Farmers Development Agency/ Agency for Aquaculture Development , Kerala

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#### **D. Capacity Building Plans**

4.9. It is proposed to retain the evolutionary, learning mode approach to capacity building, to ensure responsiveness to field realities and needs. New and innovative methods will supplement capacity development initiatives. In tune with the market approach, resource support will be procured from expert agencies or from the open market. Training venues will be hired and used, whenever necessary. Training and awareness campaigns will be organized throughout the villages. The capacity building needs will be addressed directly by KSCADC with support from Local Self Governments

#### **E. Financial Management arrangement**

4.10. The KSCADC will be responsible for the Project's overall financial management arrangements. A separate finance division will work in the KSCADC, to undertake these functions. The Managing Director will be the drawing and disbursing officer.

#### **Fund flow arrangement**

4.11. **GOI to GOK:** Ministry of Finance, GOI will transfer the funds credited into the 'designated account', to the Consolidated Fund of GOK. GOI will make a one-time advance of 10% of total project cost.

4.12. **GOK to KSCADC:** GOK will open a dedicated budget line for present project, in the Demand for Grants of the Fisheries Department under Special Area Development. Funds will be released under this budget line to the exclusive account of KSCADC to be opened for the same at any branch of State Bank of Travancore (SBT) with online account monitoring facility through Fisheries Department. (The treasury account is a public account operated by GOK's finance department, whose approval is required to withdraw any funds from the account). During supervision missions, the team constituted by the funding agency will review the usage of these funds as per agreed subprojects or activities.

4.13. Internal financial control mechanism will be ensured. Some of the key control parameters are:

- ✧ timely release of Project funds by GOI to GOK and GOK to KSCADC
- ✧ control of funds released
- ✧ internal audit at the KSCADC to ensure compliance with laid-down guidelines.
- ✧ systems and procedures, and effective utilisation of Project funds
- ✧ adequate authorization and approval of Project expenditure
- ✧ monthly bank reconciliation
- ✧ monthly management information system to ensure regular reporting on Project expenditure and funding
- ✧ concurrent audit of the tranche request as a basis for release of installments and to ensure efficient fund utilisation prior to next tranche release
- ✧ Public displays of financial information, access of accounting records to all government body members and social audit procedures to ensure transparency and oversight functions.

Financial audit arrangement

4.14. Statutory audits: The Project's audit will be conducted, under agreed Terms of References, by an independent firm of chartered accountants. The audit will comprise an audit opinion and certification of the personal finance specialist, and a management letter containing key observations and recommendations. The audit is to strengthen the internal control framework and provide the KSCADC with timely judiciary assurance that: (i) financial management, procurement systems and internal control procedures, as applicable to the Project, and (ii) the financial information being submitted is in agreement with the financial records and can be relied upon to support the disbursements made by the Funding Agency. The report of the statutory auditor will be shared with the Funding Agency.

4.15. Internal audit: The internal audit of the Project Financial Statements will be conducted in-house and reports will be verified by the KSCADC management.

#### **F. Procurement arrangements**

4.16. KSCADC will be the authority for all types of procurement—goods, works and consulting services—to implement the Project. Procurement will be undertaken in accordance with guidelines if any provided by the funding agency. The aim of procurement is to obtain right quality of goods, works and services at reasonable and competitive price. The procurement policy is based on the following principles:

- ✧ Economy and efficiency in Project implementation.
- ✧ Economy and efficiency in the procurement of goods, works and services involved.
- ✧ Equal opportunity to all eligible bidders in providing goods and works, by providing timely and adequate notification of bid documents.
- ✧ Encouragement to development of domestic contracting, manufacture industries and consulting firms.
- ✧ Transparency in procurement process.

4.17. For procuring goods, works and services (other than consultancy services) the following methods will be used:

- ✧ international competitive bidding;
- ✧ national competitive bidding;
- ✧ shopping;
- ✧ direct contracting; and
- ✧ force account.

4.18. For procuring consultancy services, the following methods will be used:

- ✧ quality- and cost-based selection;
- ✧ quality-based selection;
- ✧ selection under a fixed budget;
- ✧ east-cost selection;
- ✧ selection based on consultant's qualification;



- 
- 
- ▲ single source selection;
  - ▲ individual consultants; and
  - ▲ commercial practices.
- 4.19. For procurement of skilled or unskilled labour, the methods will be:
- on daily wages (muster roll); and
  - community labour.
- 4.20. Community procurement will be through:
- ☒ market survey (shopping); and
  - ☒ beneficiaries and LSGs.
- 4.21. The choice of appropriate method of procurement is related to the nature, size, complexity, likely impact of the assignment, technical and financial considerations, and particular circumstances of the assigned job. It is necessary to define the assignment, the objectives and scope of goods, works and services before deciding the selection process. Procurement of goods, works and services (other than consultancy services) will be as per guideline issued by the funding agencies. Prior clearance will be obtained in all contracts where contract value exceeds the original contract value beyond 15 per cent, as well as for granting extension in stipulated period for performance of the contract.
- 4.22. There will be a separate procurement plan as agreed by the funding agency and State Government. The Procurement Plan shall include description of contracts for goods, works and services required to be carried out in the Project, consistent with Project principles, the estimates after technical and administrative approval and proposed methods for procurement over the Project implementation period. The procurement shall be consistent with budgetary allocations. The Procurement Plan shall be updated annually or as needed at any time during the duration of the Project.
- 4.23. The Procurement Plan is important for ensuring:
- satisfactory implementation of the Project;
  - speedy transfer of resources by way of disbursement;
  - economy and efficiency; and
  - success of the Project.
- 4.24. Under the Procurement Plan, works, goods and services to be procured will be identified year-wise over the implementation period. Details of works to be procured under the Project, year-wise with estimated cost and method of procurement shall be worked out in terms of number of fishing villages to be covered under each sector, estimated cost thereof, requirement of resources and materials, sources of supply, and availability of contractors meeting criteria to undertake the works. Similarly, the details for procurement of goods, equipment, vehicles, furniture, etc., year-wise over the Project period, shall be prepared separately. The details of consultancy services to be hired—in terms of estimation of man months, estimated cost, method of procurement, and year-wise over the Project period—shall be projected.

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- 4.25. For procurement of works, goods, equipment etc. suitable packages shall be framed, which shall be determined by the following factors:
- ☒ time limits;
  - ☒ economies of scale;
  - ☒ geographical location (dispersal of works);
  - ☒ nature of goods and works required (example, extent of plant and equipment); and
  - ☒ capacity of contracting agencies

#### **G. Transparency and Accountability**

- 4.26. In accordance with the Right to Information Act, 2005, the Project will establish transparency and accountability measures to enhance disclosure of information and facilitate civil society oversight. All fund transactions shall be carried out with due diligence ensuring utmost control and transparency in all financial dealings.
- 4.27. Enhanced disclosure, requiring changes in mindset and behaviour, will be encouraged through incentives and remedies. To develop a credible system that handles comments, suggestions and grievances, the Project will (a) clearly define incentives and remedies available; and (b) develop monitoring indicators for compliance and impact on outcomes.
- 4.28. There will be separate Project Management Control Table (PMCT) for each sub project, in which details micro level activities, its time frame, responsible officer and agencies, expected constrains, its remedies etc will be incorporated. An officer will be specifically engaged for the implementation of each sub project and will be accountable for implementation with respect to its time bound completion of each micro level activities, quality and quantity of work etc.

#### **H. Environmental and Social Safeguards**

- 4.29. The KSCADC shall carry out an Environmental Impact Assessment to study the baseline environment situation and identify the Project's potential environment risks and impacts. The study also suggest a methodology for planning, designing and implementing investment in Infrastructural development by preventing, minimizing or mitigating adverse environmental effects, and enhancing positive impacts.
- 4.30. Most subprojects will be small and environment mitigation measures will be integrated during technical design, appraisal of DSRs, construction, and operation and maintenance.

#### **I. Operation and Management**

- 4.31. The new pucca houses for kutch house dwellers shall be maintained by selected beneficiaries on handing over the structures after completion. The over all supervision will be made by a joint committee consisting officials from Fisheries department, KSCADC and LSGDs. The structures proposed to be constructed will be strong enough to with stand the coastal environment and requisite minimal maintenance.

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- 4.32. On completion of the drinking water projects, all the assets and facilities created under the project shall be operated and managed either by Kerala Water Authority or by self sustainable mode by User groups consisting of beneficiaries under the supervision of Local Self Government.

#### **J. Monitoring and Evaluation**

- 4.33. Govt. of India will undertake Prior Review, Annual Review and Post Review of project implementation to ensure timely completion and are being strictly complied with. The Project's monitoring and evaluation (M&E) system is designed to ensure effective monitoring of inputs, outputs, sustainability and outcomes of state-wide decentralized and demand-responsive approach to Infrastructural developments. A key feature of the system will be speedy and efficient Project monitoring using computer network based MIS, so that a model for the sector can be developed for state-wide scaling up.
- 4.34. The M&E system for the Project will monitor Project implementation and evaluate the Project for continuously feeding into learning during implementation. The M&E system will enable the KSCADC to undertake timely assessments of the decentralised, demand-responsive model for service delivery, and identify bottlenecks to intervene appropriately. The M&E system will thus aim to:
- track progress (physical and financial) to determine whether the Project is achieving the targets set;
  - track effectiveness (of processes) to ensure that results comply with Project objectives; and
  - track issues relating to sustainability and use feedback to improve the model.
- 4.35. The M&E system for the Project will have three components: the performance monitoring system (quantitative progress), the process monitoring system (qualitative progress), and the impact evaluation system (achievement of objectives).

#### **The Performance Monitoring System**

- 4.36. Performance monitoring involves assessment (self-assessment and others' assessment) and quick, decisive action of quantitative progress. It relies on input and output indicators, as well as intermediate result indicators, to measure Project performance. It tracks the progress of works—against time and costs specified—and provides timely feedback to Project partners, so that budgeted targets are met. The system also assesses contract compliance (of inputs, outputs, and activities) and financial management (record-keeping, procurement, and asset management).

#### **The Process Monitoring System**

- 4.37. Process monitoring involves selecting processes, systematically observing them, comparing them with the ideal, and communicating how to achieve maximum efficiency. It is used to continuously improve institutional arrangements (procedures, norms, instruments, training, communication, and other interventions), as well as feed into long-term, strategic evaluation. It is guided by the Project's values or carrying concepts (demand responsiveness; cost recovery; decentralisation of service delivery, through strengthening of local organisations; asset ownership-management by village communities; role of government in human resource

development, monitoring and regulation; and participatory decision-making, with greater role for women).

#### **The Impact Evaluation System**

- 4.38. Impact Evaluation involves assessing the extent to which the schemes and processes of the Project actually promote the Project objectives. It includes to what degree the Project has delivered sustainable health benefits through improvements in water and sanitation services; improved rural incomes through time savings and income-earning opportunities for women; and promoted greater awareness and local management capacity regarding gender, sanitation and environmental management. Impact evaluation uses outcome indicators and feeds into long-term, policy-level assessments in strategic evaluation.
- 4.39. The main audience of performance and process monitoring is the Project implementer, while that of impact evaluation are the clients (GOK, the funding agency) and the owners of the scheme (the community).
- 4.40. Besides, a Result Framework will be developed to monitor results during Project implementation. It comprises outcome indicators for Project development objectives, intermediate result indicators to measure performance of all Project components, and information on how M&E information will be used. Arrangement for result monitoring comprises frequency and institutional responsibilities for data collection and reporting. A baseline survey will gather baseline information on key indicators of the Project. The databases created will be periodically updated utilising the information generated through PMIS and other data collection tools.

#### **K. Reporting**

- 4.41. Quarterly Progress Report will be the main reporting mechanism of the KSCADC to the GOK, GOI and the other agencies. These reports, covering all operations, will review emerging trends in the Project, and help guide decision-making. They will provide information on the physical and financial progress of the Project, and list the major activities undertaken during the quarter. These reports will be a summary compilation of the different reports generated in performance and process monitoring. Results of impact evaluation, if any in that period, will also be included.

#### **L. Conclusion**

- 4.42. The project will fill the critical gaps prevalent in the inland fishing villages in a holistic manner. This will address the household specific need of the coastal area and will improve the socio-economic conditions in these inland fishing villages to a level which can be one of the models for Special area development in the country. Major outputs expected
- Ø The housing problem of the fishermen of the state will be addressed completely, thus providing them a good quality life with an essential asset and thus improving their physical and mental well being.
  - Ø Widespread piped water coverage throughout the coastal areas of the state thus crafting an enduring solution to the paucity of potable drinking water
  - Ø Improvement of the quality of the environment and thus the quality of life of the fishermen community by providing proper sanitation facilities.

## Annexure - I

### LIST OF INLAND FISHING VILLAGES

Sl. No.	Name of District	Name of Villages
1	Kollam (26 Villages)	Prayar, Sastamkottah, Puthukkadu, Mangadu, Koyivila, Kadavoor, Aravila, Neendakara, Prakulam, Perumon, Mundakkal, Sinkarapally, Chavara South, Chavara North, Koduvila, Kumbalam, Muttom, Chemmakkad, Kanjirakkodu, Manalikkadu, Kuripuzha East, Mukkadu, Kottiyam, Padappakkara, Ayiramthengu, Arinelloor
2	Pathanamtta (3 Villages)	Paramala, Thiruvalla, Maramon
3	Alapuzha (24 Villages)	Kayamkulam, Kochiyard Jetty, Chodatheruvu, Payippdu, Karuvatta, Chenkole, Muhamma, Thirunellur, Panavally, Arukutty, Perumpalam, Aroor, Thuravoor (North), Thuravoor (South), Vayalar (East), Mannar Sangham, Thalavady, Noornadu, Eraviperoor, Marakkattu Ward, Ramamkary, Kavalam, Thevarvattom, Thanneermkkom
4	Kottayam (8 Villages)	Changanassery, Kumarakom, Thiruvvarpu, Vaikom (Town), Thalayazhom, Chempu, Kaduthuruthy, Kottayam
5	Idukki (1 Village)	Idukki
6	Ernakulam (15 Villages)	Kadamakudi, Ezhikkara, Mulavukadu, Cheranelloor, Maradu, Kumpalam, Udayamperoor, Ernakulam (West), Poonithura, Nedamagramam, Ernakulam (East), Kumpalangi, Palluruthy, Vadakkekkara, Puthenvelikkara.
7	Thrissur (7 Villages)	Pullute, Poyya, Puthenchira, Nedupuzha, Venkidangu, Karalam, Velloor
8	Palakkad (2 Villages)	Muthalamada, Palakkadu
9	Malappuram (6 Villages)	Kadavonadu (Ponnani), Gomughom, Purathoor, Kutturapuzha (Poorapuzha), Palathungal, Kadalundipuzha
10	Kozhikode (8 Villages)	Karuvanthuruthy, Cheruvannoor, Eranjikal, Vengalam, Vellur, Teragi, Ullookadavu, Akalappuzha
11	Kannur (5 Villages)	Kurinjimangalam, Ezhom, Kattampally, Mandalloor, Eranholi
12	Kasaragod (2 Villages)	Peelikode, Thrikkaripur