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KERALA

**RURAL WATER SUPPLY
AND
SANITATION PROGRAMME
KERALA, INDIA**

Support Mission (KER-9)

4 - 21 May 1998

KER-9

June 1998

Mr Sjef Gussenhoven (ETC)
Mr Maarten Blokland (IHE)

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LIST OF ACRONYMS

AE	Assistant Engineer
AEE	Assistant Executive Engineer
CDS	Centre for Development Studies, Trivandrum
CE	Chief Engineer
CED	Centre for Environment and Development, Trivandrum
CG	Core Group
CO	Coordinating Office (SEU)
CPHEEO	Central Public Health and Environmental Health Organisation
CR	Cost Recovery
crore	10 million
DGIS	(Netherlands) Directorate General for International Cooperation
ED	Executive Director
EE	Executive Engineer
ETC Foundation	Consultants for Development Programmes (Netherlands)
FO	Field Organiser (temporary field staff of SEU)
FY	Financial Year
Gol	Government of India
GoK	Government of Kerala
GoN	Government of The Netherlands
IEC Cell	Unit under CRD to implement Sanitation Programme Kerala
IEC	Information Education and Communication
IHE	International Institute for Infrastructural Hydraulics, and Environmental Engineering, Delft (Netherlands)
IPD	Investigation, Planning and Design Division of KWA
IRC	International Reference Centre for Community Water Supply and Sanitation
JRM	Joint Review Mission (1989, 1992)
KWA	Kerala Water Authority
lakh	100,000
LCS Programme	Low Cost Sanitation Programme
lpcd	litres per capita per day
MD	Managing Director of the Kerala Water Authority
mld	million litres per day (indicates size of scheme)
NABARD	National bank for agriculture and rural development
NAP	Netherlands Assisted Programme
NEDA	Netherlands Assistance (new acronym for DGIS)
NGO	Non-Governmental Organisation
NHRDP	National Human Resources Development Programme for the RWS/S sector (Rajiv Gandhi national Drinking Water Mission)
O&M	Operation & Maintenance
OMIP	Operation and Maintenance Improvement Programme
Panchayat	local administrative authority for a rural area covering a population of approx. 20,000
PASSS	Pazhakulam Social Service Society, an NGO
PMU	Project Management (or Monitoring) Unit of KWA
POTWATS	Protection of Traditional Water Sources programme
PTU	Pump Testing Unit
QMP	Quality Monitoring Programme
QMU	Quality Monitoring Unit
RNE	Royal Netherlands Embassy (New Delhi)
Rs	Rupees
RSM	Review and Support Mission of Dutch funded schemes for RNE
RUDSETI	Rural development and self employment training institute.
RWS/S	Rural Water Supply and Sanitation Sector
SE	Superintending Engineer
SEU-F	Socio Economic Unit Foundation
SPA	Standpost Attendant

TLO	(Netherlands) Technical Liaison Officer, based in Cochin
ToR	Terms of Reference
UNDP	United Nations Development Programme
ward	subdivision of Panchayat covering a population of 2,000 to 4,000
WATSAN	Water and Sanitation
WHO	World Health Organization
WQM	Water Quality Monitoring
WWC	Ward Water Committee, voluntary group consisting of 5-7 members

1. INTRODUCTION

This "KER-9" report reflects the findings of one in a series of missions, fielded by the Netherlands Embassy in New Delhi, to review and support the **Netherlands Assisted Water Supply and Sanitation Programme in Kerala**.

The specific objectives and composition of these missions are flexible and adjustable to the momentum / requirements of the programme implementation process.

This time the Terms of Reference (Annex 1) for Mr S. Gussenhoven concentrated mainly on the activities of the SEU Foundation.

Mr M. Blokland was assigned in the first place to support Mr B. den Tuinder in his "Reconnaissance Mission on NAP 2", which was conducted simultaneously. In addition he paid attention to a number of issues related to the implementation of ongoing WS schemes by KWA and related subjects under NAP I (reference is made to the KER-8 report for details). With overlapping timetables of the two members, the mission was conducted between the 4th and 21st of May 1998 (for itineraries see Annex 2).

For the water supply sector in Kerala, the political debate on the decentralisation of responsibilities to Panchayat levels continues to be the predominant event. In last January many questions on the ultimate consequences of the political changes were still to be answered. It now appears that during the last few months the State Government has succeeded to work decisively towards new policy directives. Hence it is expected that many uncertainties for the WS sector and the institutions involved therein, may be resolved soon.

The overall impression of the mission is that progress has been achieved by both SEUF and KWA, since the last mission in January 1998.

KWA is energetically seeking to identify its new options and responsibilities as a result of the decentralisation process. A new Managing Director has taken charge very recently. Dutch technical assistance in loco, through the TLO office, is being continued and covers different components of the programme under KWA.

SEUF is materialising its objective to develop its own niche as a professional organisation, serving the priorities for the WS/S sector policy in Kerala. Its present programme aims at both consolidation and (limited) extension of activities, plus strengthening its professional capacity. With a variety of services SEUF will focus on the low cost, community managed, and integrated sanitation and water supply options, which shall be sustainable in the rural setting. Currently, the major part of the activities has Netherlands' "core funding" in the "SEU Bridging Phase" which expires in June 1999. Concerted efforts by the SEUF team to acquire project-wise funding for new activities and from other sources, are gradually bearing fruit.

The mission wishes to express its gratitude for the dedicated support and understanding, extended by all partners in the KWA, the Government Departments and the SEUF.

2. SEU FOUNDATION

2.1 Clean Kerala Sanitation Programme

2.1.1 Development of State policy in Sanitation and Health

The state level Task Force, constituted by the GoK to elaborate the I.E.C. strategy and policy frame for Sanitation and Health, has submitted its report under the responsibility of the Commissionerate of Rural Development.¹ Government approval is now awaited.

The SEUF has been actively participating in the work of the Task Force.

Under the Commissionerate of Rural Development, an IEC Cell has been constituted with a mandate to oversee the Clean Kerala programme. A proposal to depute a senior SEUF officer to this cell to ensure close co-operation and monitor implementation, is now being considered favourably. (Budgeted in CK SEUF budget.)

2.1.2 Take off in implementation of CK

The take-off of the Clean Kerala Programme is facing some procedural complications.

The Netherlands assistance to the "Clean Kerala" programme was initially planned to cover 5 districts. The implementation approach aims to integrate physical construction, IEC and programme management, through co-operation of complementary partners. The basic concept of the programme is the pooling of resources from local, State and Central Government, the prospective users, with Netherlands Assistance (NEDA) going towards building the capacities of the Kerala Gvt to provide support, and to quality control.

In addition, "Clean Kerala" is now to be extended to all districts of the State and to be incorporated in the Total Health Programme, launched on a campaign basis by the Government of Kerala.

Meanwhile it appears that funds needed to implement these sanitation programmes have not yet been fully sanctioned by the Central and State Governments. However, a proposal for funding of IEC Capacity Building activities for five districts had been forwarded through proper Government channels to Delhi, eventually to be considered by the RNE. There is as yet no clarity on the present status in the processing of this project document.

It would be difficult for the RNE to approve funding of inputs for IEC Capacity Building, estimated in the five district project document at 8 crore Rs., before having reasonable guarantees that the other contributions will be available for implementation in the programme area. This implies that the new allocations from the Netherlands Government may be taken up for discussions and approval at appropriate bilateral levels, once the complete configuration of funding arrangements has become clear.

The mission has discussed extensively with the officers of the IEC Cell (operational unit of the Task Force), searching for a pragmatic solution to facilitate an effective start with the implementation of the schemes wherever financial and operational conditions allow to do so.

In Kottayam district, with the dynamic initiative of the local stakeholders latrine programmes have been started. Subsidy funds and local contributions to implement constructions are available. GoN support is channelled through SEUF for the pilot project in the Vaikom Block in this district. The Kottayam district may be considered a demonstration area to induce other districts to follow its example in the all Kerala health campaign.

¹ "IEC Strategy for Sanitation and Health Programmes", Government of Kerala, Commissionerate of Rural Development, Thiruvananthapuram, February 1998.

An agreement regarding the inputs of SEUF in the IEC component and the respective administrative arrangements, was reached with the Principal Secretary to Government for Rural Development, Mr P.K. Sivanandan:

- funds available within the "regular" budget of the SEUF for sanitation will be mobilised to start IEC capacity building activities in the Kottayam district forthwith;
- the activities will be implemented on the basis of the "Clean Kerala" concepts;
- a workplan will be made for the period of 12 months up to end May 1999 (expiration of RNE funding of SEUF bridging phase);
- SEUF will closely collaborate with the KSSP and support the IEC Cell (CRD), through financial support as well as contributions in kind.

The details of the agreement are given in Annex 3.

Within SEUF Mr C.O. Kurian will act as project manager for the CK/IEC project activity. He will be supported and substituted by other staff members and the executive director. The detailed manpower planning has been worked out during the last mission in January.

2.1.3 Selection criteria

Preferably, activities undertaken through the Netherlands assisted projects would have to be co-ordinated thematically as well as geographically and operationally. Looking at the present configuration however, selection of districts for NAP schemes does not seem to tally very well. NAP Sanitation activities are not supported in the same districts as the water supply KER II or the small scale RSM pilot projects.

Selection of the districts/blocks and panchayats for the IEC/Sanitation projects is the result of an interaction with local and state level authorities. In principle the approach is demand based: where Panchayats decide on priority in development planning for W/S and where government support is available. In Kottayam SEUF already had been known for earlier activities. It might well be that in Palchat a demand for sanitation is potentially existing, Panchayat people simply did not know how and where to express this.

In the RSM supported pilot schemes for decentralised water supply and sanitation options, the selection was partly based on the choices made in the first KER II report. In the extensive study preceding KER II, Mallapuram was indicated as one of the poorest districts in the State. Moreover it is one of the districts included in the Clean Kerala project proposal. Different technical (typical environments and technologies) and logistical considerations played a role as well: within the same administrative (i.e. district) unit these typical situations are available, making institutional experiments more easily comparable.

From a short list of Panchayats with approved and flexible plans which allow for choosing appropriate technologies and situated in typical environments, the final selection was made. This was done in close consultation with the district and block authorities:

1. Cheekode (representing midland and upland)
2. Perumbadappu (coastal)
3. Kondotti (laterite, expressed needs in environmental sanitation).

It should be noted that the process to develop KER II is still in a very preliminary stage. In fact no final decisions regarding policy priorities have been taken so far. In other words it would seem rather precarious to anticipate on the conclusions of the first draft report which have an informal status only.

2.1.4 Fund Flows

The formal procedures for the fundflow as well as the reality of the money streams in practice have been verified during the mission. To address this subject, a team of professional auditors headed by M. Subbash Mittal was fielded by the Embassy, simultaneously with this review mission. Hence, for a proficient analysis of these issues, reference is made to the auditor's report.

From its own field observations, the mission draws the conclusion that **between the parties** (i.e. Beneficiaries, District and Panchayat authorities, GoK, KSSP and SEUF) sound arrangements for the

clubbing of the available funds, and the allocation of the same, have been made. Disbursements are only allowed after proper inventories of participating beneficiaries, planning of IEC and construction have been done on the basis of the established procedures. Cash is handled through a bank account, operated jointly by Panchayat and SEUF officials.

The auditors have rightly pointed at some cases where contributions (advances) from SEUF have been somewhat larger than they should have been according to procedures. Reasons for these exceptions have been analysed. Sometimes the number of below poverty line beneficiaries turns out to be higher, and/or certain pressures to cater for shortcoming in local resources could not be resisted. As stated above, the auditor's report will certainly give an in depth insight in the causes and suggest measures for improvements.

Reflecting the responsiveness of implementing parties to the money advances made from Government/Dutch sources, there is a varying time period for depletion of these advances. Despite strict planning and monitoring, time lags in completing construction works do occur in sometimes. According to SEUF, various factors attribute to these (few) cases.

1. delays from the part of the Panchayat in contributing their share into the joint bank account.
2. seasonal scarcity of sand and other construction materials
3. political reasons (like forthcoming elections)
4. non availability of masons
5. delays in money transfers from the RNE to the SEUF.

Though these factors have prevented SEUF, during a couple of months in 1997, from depleting the available Dutch funds, the planned schemes are expected to be completed before the next monsoon. A statement prepared by SEUF (Annex 6) indicates the status of the total fund flow from SEUF to Panchayats per end of May 1998, with a total of 2 crores of Rupees. At this date, total allocations from the RNE for these schemes amounted to approximately 3.3 crores of Rupees.

2.1.5 From low subsidy to no subsidy

Responding to one of the terms of reference for this mission, SEUF has produced a statement indicating the evolution of the subsidy percentages granted for latrine construction, since 1988.

The table given in Annex 5 indicates clearly the result of the policies in this respect (steadily declining subsidy amounts), developed in the dialogue with the RNE, and other Dutch advisors, and applied by SEUF.

This can also be illustrated in the ongoing "Coastal Sanitation" programme, in 14 wards in Kollam and Mallapuram districts, under DRD. DRD provides a subsidy of Rs. 600. RNE/SEUF provided a subsidy of Rs. 1200. This is now reduced to Rs. 1000. The subsidies go into a joint account of the DC and SEUF. From there they go to the joint accounts of the Panchayats and SEUF. The Panchayats add another Rs. 600, so for each BLP latrine Rs. 2200 is available. The households have contributed Rs. 600-700, so that of the total construction costs of Rs. 2900-3000 63% is now India-financed. (Was originally: 25%.)

A problem in one ward (fishermen) was that here the subsidy came from Masyfed. They put Rs. 750 into a Joint Account with SEUF, which paid Rs. 1200. For these latrines the Panchayat did NOT contribute - although the fishermen are part of it. In the end the families decided to contribute the bricks and the cash. Their contribution ranged between Rs. 900 and Rs. 1400, the latter being for the high water table area. External financing was thus the same (some 36%) or slightly (6% more) in the case of a high water table, but the fisher households paid 8 to 20 per cent more for their latrine than the other BPL households (see table).

Regular Panchayats program			Masyfed program		
		%			%
SEUF/RNE	1000	35-36	SEUF/RNE	1200	36-42
DRD	600	21	Masyfed	750	22-26
Pan	600	21	Pan	0	0
HH	600-700	24	HH	900-1400	32-42
Total cost	2800-2900		Total cost	2850-3350	
Local financing		63%	Local financing		58%-64%

This disbalance will now be redressed under the CK program (see table below)

Non-waterlogged			Waterlogged		
		%			%
Gol	810	22,5	Gol	900	22,5
DRD	810	22,5	GoK	900	22,5
Pan	1260	35	Pan	1400	35
HH	720	20	HH	800	20
Total cost	3600		Total cost	4000	
Local financing		100%	Local financing		100%

(source of info: SEUF)

Hence, in the new programme, Clean Kerala, subsidies from Netherlands funds are excluded altogether. Except for a few cases (Vaikkom) where commitments have been given earlier by local authorities and SEUF officers, these will be complied with, but fade out shortly.

This is a new development aiming at making ongoing sanitation programmes self-managed and sustainable under the new decentralisation policy. As such the program is of great value not only to Kerala, but in India as a whole, where highly subsidised, supply driven approaches too often failed to induce large scale adoption of excreta disposal methods that are safe to health and the environment.

In the near future the sustainability of this approach will have to be tested. The Government is making it a point that the Clean Kerala / Total Health objectives must be achieved in an all convincing campaign model. This model has been inspired by earlier successes in the literacy campaigns, and the recent people's planning campaign.

These objectives, stated by the Kerala health authorities, might turn out to be slightly ambitious. Full coverage of the whole of Kerala with adequate sanitary facilities may not be possible within a time frame of five years. Achieving the stated goals may have considerable political importance. As a consequence, there will be pressure to compromise on the bottom-up, sustainable and participatory approach now advocated. In other words, political pressure may enhance government subsidy elements to speed up the progress in achieving the physical targets.

The IEC strategy component is crucial in countervailing these risks, in mobilising the local resources and managing the process and control quality, and finally ensuring more long-lasting impacts.

One complementary observation may be made from a historical point of view. The sanitation projects developed and implemented for many years with the assistance of the SEUF carried an essential component, subsidising directly the physical construction of household latrines.

In the future programmes under the Clean Kerala programme, the situation will be quite different as SEUF's inputs will be limited to training and quality control and not relate to subsidies for creating individual or community assets.

This will imply a change in the position of SEUF: the local stakeholders (beneficiaries, Panchayats, district officials, etc.) will be clients demanding the services of SEUF. These services must be delivered timely, tailor made and at acceptable levels of quality. Inversely, in its close collaboration with the IEC Cell, SEUF will have to monitor the cost efficiency and effectivity of the project delivery by other implementing parties.

2.2 SEUF Workplan April 1998 - June 1999

The mission has studied the workplan of SEUF for the period of 1st of April 1998 to 30th of June 1999. Comments and suggestions for improvements have been shared with the SEUF team members available in Trivandrum.

From the workplan it is becoming clear and obvious that the Foundation is making progress in developing its range of activities and in its efforts to conquer its position in the W/S sector in Kerala. Gradually planning instruments are being internalised.

It is certainly encouraging that principals (donors) entrusting SEUF with assignments are growing steadily in number and size.

During the past two years, a conscious attempt was made to widen the scope of SEUF services, from water supply and household sanitation to water resource management, environmental sanitation, and capacity building, gender and training, etc. Presently it would seem that time has come for the Foundation to define more sharply the focus in its package of services, aware of its own strengths and weaknesses.

It has been agreed with the executive director that the workplan will be adjusted and enhanced on a number of points, which were discussed with the mission. In particular:

- make more precise estimates of manpower needed for the implementation of the activities proposed;
- elaborate more in detail certain activities which are mentioned rather provisionally in the workplan, in particular in Hygiene promotion and in the ID section;
- the training calendar needs to be updated on the basis of the latest developments;
- on research and study activities the objectives, scope and implementation schedules of the individual items need to be specified.

In general terms, close reading of the workplan results in the conclusion that apparently the internal project monitoring system is not yet full in place and functioning. There is challenging scope for improving the maintenance of project files, assignment of project managers, budget control, and time/human resources planning.

It was agreed that a paragraph on the internal organisation of SEUF will be added to the workplan. It was also agreed that the SEUF will present a revised version of the workplan before the end of June.

The mission supports the general lines of the workplan and approves it under the condition that the above mentioned adjustments will be complied with as soon as possible.

It is suggested that during following RS-missions the realisation of the workplan objectives must be monitored, preferably on a three monthly basis.

2.3 Internal organisation

The selection procedure for the nomination of a *new Executive Director* for the Foundation is in an advanced stage. The final decision may be expected by the end of June.

Though in general terms, the *financial administration of the SEUF* is performing its duties more than satisfactorily, it is increasingly coming under pressure. The main reason being the growing complexity of the financial monitoring and bookkeeping of the increasing number of different projects and projects and funding agencies as well as clients.

The fully endorses the conclusion that extra support is required to enhance the skills of the present staff. Options for exposure visits and training in more sophisticated software are already being identified with the help of the auditors from the Embassy. Some investments in adequate new electrical equipment may be necessary as well.

Additional technical assistance may possibly be made available by the Embassy.

Earlier efforts to *enhance computer skills* of administrative and professional staff in SEUF seem to have come to a standstill. Even though such efforts are time and energy consuming, the resulting advantages of improved productivity and alleviation in workload, would certainly pay off. Hence the mission's recommendation to pay more attention to these aspects.

Management and administrative *support to the Jeevapoorna society*, has been an issue dealt with extensively during the last two missions. From the head office SEUF has paid attention to the problems of this important project. Indications are however, that structural improvements are yet to be achieved. The mission insists on a *more continuous support for at least one year, and replacing the local (administrative) support staff if necessary.*

The issue appears to be not merely the upgrading of the administrative monitoring, but certainly also the cost effective running of the workshop and the sales.

2.4 Technical Support Unit

The mission visited some of the sites where pilot activities in water resource management (water harvesting) and environmental sanitation (composting) have been started. Local partners in Panchayats, beneficiary groups and field workers are giving very positive feedbacks on these initiatives. The pilot project is well established now and has no real difficulties in implementing the planned actions. A temporary office facility could be rented in Kondotty.

In two extensive sessions in SEUF Office in Trivandrum, the workplan for the TSU project has been discussed at length with all mission members.

From this, the mission's conclusions are in summary:

- SEUF should seek to implement the pilot project progressively, as it serves a very relevant purpose: the development of integrated, low tech, socially as well institutionally appropriate solutions for village water supply and sanitation.
- the size of the scheme will be limited and SEUF shall keep a low profile, concentrating on the three Panchayats indicated earlier: Cheekode, Kondotty and Perumbadappu.
- the scope of the pilot actions must basically be limited to "proven" technologies, to be applied and developed in combination with social and institutional settings.
- an important additional aspect to be taken into account is the financial feasibility of the proposed options, for beneficiaries as well as local government bodies (*replicability*).
- some innovative attempts on "promising" technical options (recharge of groundwater; water stocking) may be tried out carefully; in these cases, second opinions on proposed designs will be invited from external experts and RSM.
- accurate monitoring and documenting of the experiences gained in the pilot sites are crucial for future plans of action, and to support W/S sector development; as SEUF is strongly vocated to implementation and is very much inclined to act on demands expressed by its clients, this research aspect would require particular attention.

The TSU project document as included in SEUF workplan '98-'99, will need some revision.

The project manager has committed himself to do this within one month.

Responsibilities of the senior consultant Mr Namboodiri and the SEUF and the project manager, Mr Isaac John, have been stipulated clearly, as well as the clubbing of resources from RSM and SEUF to realise the project.

SEUF staff other than those directly involved in TSU will be invited to assist in internal workshops and evaluations. Training activities will be closely co-ordinated. There is a consensus that the inputs of the consultant can gradually be reduced as SEUF staff is gaining experience in setting up the field activities.

2.5 Training activities

SEUF's training section is very active in developing its training products and services. Feedback obtained by the mission from two client organisations where SEUF has conducted trainings in community participation and gender issues, where positive. Some critical remarks had already been communicated to SEUF itself.

Demand for services is still growing. However, it turned out very difficult to conduct all training's according to the planned calendar, due to various reasons. For instance, for the IEC- CK programme quite a few training programmes had been included in the plan, and human resources kept available. Subsequently, considerable delays occurred in this programme's take off. Some demands had to be responded at short notice, cutting through other programmes planned.

In the mean time, new opportunities have come up. In particular in the Government sponsored "Self Help Employment Programmes". SEUF is getting involved in training of field staff and trainers to support implementation of these programmes. This is being developed with other training institutes in Kerala, like RUDSETI and NABARD.

The mission has proposed to make an internal (rapid and concise) critical evaluation of the quality of training delivered by SEUF. To keep abreast of market demand, to maintain a flexible capacity to respond and to keep training modules "fresh", constant upgrading and recycling of training technologies and skills are indispensable. To this effect feedback from unbiased outside professionals, understanding the market niche of SEUF, may be helpful. The mission has recommended that SEUF considers this issue carefully and works on it. Support from RSM can be made available.

3. KWA

3.1 Bridging activities

Terms of Reference



to proceed with the ongoing discussions on computerised billing, water quality monitoring and training

3.1.1 Computerised billing and revenue collection

The computerisation of billing and revenue collection in the Trivandrum and Cochin areas is still advancing but, contrary to expectations, has not yet been fully completed. Even though no new evidence of increased revenue in these collection areas was actually presented to the Mission, KWA did express its satisfaction with the process of computerisation and confirmed its intentions to proceed also in other service areas.

The Mission re-stated the importance of computerisation as a means to achieve increased revenue, which would help close the huge gap (Rs. 84 crores in 1995/96) between expenditure and income, and with that position KWA to provide better quality services to the customers. The Mission expressed interest in knowing about any concrete proposals by KWA for the computerisation of billing and revenue in other areas, so that these may be brought to the attention of the Royal Netherlands Embassy, for their consideration. The Managing Director, KWA submitted that proposals for computerisation of the Kozhikode (Calicut) system, and perhaps also for some of the larger comprehensive schemes will be prepared shortly, and expressed a keen interest in obtaining further NAP support.

The Mission conveyed the interest shown by KWA to the Royal Netherlands Embassy and recommended for the RNE to investigate the level of support it could offer to KWA.

3.1.2 Water quality monitoring

The issue of water quality monitoring and the related "Concluding Report on the Water Quality Monitoring Pilot Project" by Mr Rathish (KWA) and Mr Greetham (IHE) was discussed. The Report was discussed in some detail, including the worrisome findings on the quality of water ex-treatment plant and at the taps in KWA operated systems in the Thrissur District. The report, apart from proposals to alter some of the routines in the existing monitoring programme, and a recommendation to copy the monitoring and advisory tasks of the Thrissur pilot set-up to the other water quality laboratories, also identifies a follow-up project.

The identified follow-up project would have 3 main components: (1) the completion of the water quality laboratory infrastructure to cover the entire Kerala State; (2) the provision of advanced equipment to laboratories with a regional function and basic equipment to operators; and (3) a pilot to facilitate remedial actions to improve water quality in Thrissur District. The indicative budget for these follow-up activities is Rs. 676 lakhs, with the majority of funds being required for the remedial program.

The Managing Director, KWA expressed an interest to continue the Indo-Dutch co-operation in the water quality area in line with the proposals made in the Concluding Report. He resolved to formulate KWA's comments to the Concluding Report, including also a position on the proposed follow-up activities. These comments could then, together with those of the Embassy be presented to the authors, so that the report may be finalised and facilitate subsequent decisionmaking on a follow-up project. In this framework, it is important to note that the earlier apprehensions of KWA with regard to the possible restructuring of responsibilities in water quality monitoring and surveillance in Kerala based on initiatives by the Central Government, have largely disappeared. Apparently, the responsibility for continuous water quality monitoring and control in Kerala will remain with KWA, whilst the Department of Health, through its existing laboratories, will be charged with the more incidental water quality surveillance.

Pending the presentation of KWA's comments on the Concluding Report, the Mission advised the Embassy to consider the likely magnitude of possible Dutch assistance, and the ways and means of financing a possible follow-up project in water quality monitoring. Thus far, activities in this area have been financed under the Pavaratty Project that is also situated in the Thrissur District. A follow-up project might also be funded through the same project, but this would require a substantial enhancement of the concerned budget line. According to information received, a request to increase the anticipated NAP contribution to the Pavaratty project may be forthcoming anyway, as evidenced by a preliminary revised estimate that calculates a NAP contribution of Rs. 50 crores, i.e. Rs. 5 crores above the amount now agreed in the bilateral sideletter. If the estimate would need to be formally revised, which is very likely, then an enhanced budget for water quality may also be factored in.

3.1.3 Training

In earlier missions the area of training support had been brought up, and the discussions had slowly moved away from requests for direct support in course development, toward support in developing the training function. The latter would include support in the conscious institution of a systematic training management system covering the entire trajectory, or cycle rather of training needs assessment, course and materials development, lesson plan development, training of trainers and course delivery, to monitoring and the evaluation of training impact on performance in the field, and subsequent course adaptation that concludes the cycle of training activities.

The Mission re-stated the earlier interest shown by the Embassy in supporting training, as evidenced by its continuing efforts in providing fellowships to trainees for studies in the Netherlands, and its firm commitment to assist with capacity building support in the ever more strategic area of continuing and life-long staff training. The Managing Director, KWA acknowledged structural deficiencies in the training function and welcomed the idea of strengthening the existing training set-up and he directed the Training Wing to assess the areas where help and support is required.

On the training proposal for female staff, KWA submitted to find the choice of this training activity premature. KWA prefers that the above referred assessment be completed first, so that a clearer picture is available on deficiencies in training, and on the priorities in addressing these.

In keeping with the component-wise time allocation by the TLO for 1998/99 (see KER-8 report) that allows four months of time expenditure in the area of training, and given his experience in education and training, it was advised that the TLO could assist the Training Wing with the assessment of training. The KWA was happy to consider this offer. On the completion of the training assessment a workshop could be organised to discuss the findings and identify a possible follow-up activity for support to the Training Wing.

The substantial progress made in the area of training was reported to the Embassy. The Embassy expressed satisfaction with the progress made and agreed to facilitate the participation of an external advisor in the proposed workshop by suitably enhancing the separate IHE budget proposal for education and training for 1998/99. The Embassy may wish to explore ways and means of financing a training support proposal that would most likely be drafted following the completion of the assessment.

3.2 Report on other areas of attention

Terms of Reference

- advise on the Revised Estimate for Mala water supply project

3.2.1 Mala revised estimate

The NAP cost for the Mala project has risen to nearly Rs. 650 lakhs, i.e. nearly Rs. 65 lakhs above the amount of Rs. 586 lakhs agreed in the amended sideletter, and more than double the originally agreed NAP cost of Rs. 277 lakhs. Claims reimbursed by the Royal Netherlands Embassy thus far have

almost depleted the present Rupee commitment for the project, leaving a current balance of Rs. 7,500 only. A Revised Estimate for the Mala project was drawn up by KWA and submitted to the Secretary Water Supply, Government of Kerala, on 28 April 1997 (ref.: KWA/PMU/AE3/454/97). The Revised Estimate was forwarded by the GoK on 9 July 1997 to the Gol (RGNDWM) with a request to forward the same to the RNE. In a first reaction, the RGNDWM on 28.4.1998 requested KWA to re-submit the revised estimate in a slightly different format than the one already received. The Royal Netherlands Embassy in a letter to the Managing Director, KWA, dated 24 April 1998 advises that upon mutual agreement to the budget revision for Mala, an amendment to the sideletter on the increased cost and time duration will follow, in order to effectuate payment of the pending claims.

TLO and Mission member Blokland were asked to appraise the revised estimate, and advise the Embassy of their findings. A meeting was arranged with KWA (PMU), to have an initial look at the Revised Estimate and the underlying documents that were prepared by field level staff. From the documents it appears that the Rs 65 lakhs NAP cost overrun can be ascribed primarily to the 4 out of 11 project components, i.e. "source works" (+Rs 24 lakhs), "additional works for 90% coverage" (+ Rs 20 lakhs), "distribution system" (+Rs 12 lakhs), and "clear water pumpset" (+ Rs 7 lakhs). The accompanying justification explaining the cost overruns were found to be very brief, and not always accompanied by the necessary references to approvals by KWA and concurrence by the TLO. At the conclusion of the meeting it was decided that it would be necessary to organise a (series of) meeting(s) between the Deputy TLO and the field level staff, so as to complete the information requirement. After this, the appraisal will be completed by TLO and Mission Member.

3.2.2 Kundara project

The Mission was happy to learn that the new Managing Director had soon after taking up his assignment gone out to inspect the Kundara project. The MD will take a personal interest in the timely completion of the scheme and confirmed the completion of the project by the end of 1998. Shortage of funds will not become an issue and a number of technical issues will be resolved forthwith.

3.2.3 Pavaratty project

The Mission briefly discussed the works in the river bed. The potential conflict between water supply and irrigation interests that might present itself after the completion of the downstream Regulator is acknowledged by KWA. However, firm action to reach specific project-related agreements with the appropriate authorities that would ensure water supply to have priority over irrigation, as suggested earlier by the Mission, is not considered a pressing issue by KWA. In fact, KWA feels sufficiently covered by the National Water Policy that prescribes priority for drinking water supply.

The immediate need for protection of exposed riverbed pipelines was raised. It was understood that instructions have been issued to ensure timely and appropriate action to safeguard the pipes from being washed out during the upcoming monsoon period.

Regarding the more permanent protection of the riverbed pipelines, it was understood that KWA has taken decisions that are in variance with the recommendations presented by consultant Delft Hydraulics in its final report, and has directed the Chief Engineer (NR) to proceed accordingly. The Mission and the Embassy would like to be appraised of the decision by KWA and its justification, if only in view of the amount of money that was spent on the consultancy.

3.3 TLO

Terms of Reference

- to meet the TLO, Mr Stuart Pearson and discuss the requirement for co-ordinators in view of the tasks in Kerala I

3.3.1 Workplan TLO, 1998/99 - Co-ordinators

The Royal Netherlands Embassy requested the Mission to discuss the requirement for co-ordinators with the TLO. The TLO and his professional staff thus far concerned themselves primarily with the completion of the projects under Kerala I. An expansion of the duties of the TLO, and the resulting time requirement was discussed by the KER-8 mission in January 1998. The additional activities by the TLO would include liaison and technical assistance functions in water quality monitoring, training, computerised billing and revenue collection, all in collaboration with KWA, and the pilot project by SEUF/TLO.

The proposal forwarded by the TLO includes for local professional staff inputs. These were discussed in detail with the TLO, and will be reported below. The local professional staff inputs concern advisors (or co-ordinators) for the Kundara (1) and Pavaratty (1) construction projects, the activities in As-laid Mapping (1) and the preparation of Completion Reports (2) for the completed construction projects, and as a result of the expansion of duties, advisors for training (1), and water quality monitoring (1). In addition there is the Deputy TLO (1). The total staff input for these 8 advisory positions over the 2-year period 1998/99 is about 7 fte, and is proposed to be delivered by 5 senior engineers that have retired from KWA. The detailed inputs are shown in the table below.

The need for a TLO co-ordinator for the Pavaratty construction project has been subject of discussion between the concerned KWA staff and the TLO. The primary justification for the co-ordinator is that, on the basis of his independent position and former seniority in the KWA, he can enhance the speed of bureaucratic processing within and outside KWA and can provide technical advise to field staff. These inputs can be safely assumed to have a positive influence on the rate of progress with which the schemes are being completed. This would hold true also for the Pavaratty project, be it that this scheme is doing comparatively well or even very well. However, the ever present possibilities of changes in the staffing of the project, due to transfers or promotions, together with the desire to complete the scheme by the end of next year, does, in the view of the mission make a case for the input of a co-ordinator. This advise should in no way be interpreted as a judgement on the quality and input by the present staff of the Pavaratty project, but rather as an expression by the "Dutch" side to contribute to achieving completion by the targeted date.

Activity	Incumbent	Total Time Input (year)	Time Input per Quarter (full time equivalent)								
			1998				1999				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Deputy TLO	Surendran	2	1	1	1	1	1	1	1	1	1
Kundara	Rajasekharan	1	1	1	1	1	-	-	-	-	-
Pavaratty	Venugopalan	1¼	-	-	0.5	0.5	1	1	1	1	1
As-laid Mapping	Divakaran	1½	1	1	1	1	1	1	-	-	-
Completion Reports	Venugopalan/ Padmanabhan Achari	½	0.5	0.5	-	-	0.5	0.5	-	-	-
Training	Padmanabhan Achari	¼	-	1	1	-	-	-	-	-	-
Water Quality Mon'g	Venugopalan		-	-	0.5	0.5	-	-	-	-	-
		7	3.5	3.5	5	4	3.5	3.5	2	2	

3.3.2 TLO monthly activity planning

The TLO, Mr Pearson, has expressed a desire for external advice in setting the agenda for his activities. This is thought to be very useful indeed as it provides an opportunity to co-ordinate the work of the TLO and the Mission, to the benefit of the KER-I project.

It is proposed that Maarten Blokland, Mission Member KER-I will take up this responsibility. The implication, in practical terms will be that the TLO and the Mission Member will set the TLO's agenda on a monthly basis. To this effect, the TLO will write a brief review of activities and results in the past month, set out the immediate challenges for the coming month, what results are to be obtained in

which activity area, and what time allocation would be required. This monthly report will be subject of a brief e-mail communication between TLO and Mission Member, after which the report is finalised by the TLO, and the monthly agenda set. The input by the Mission Member is of an advisory nature, and will not relieve the TLO or his Employer of the responsibilities agreed under the contract between the Employer and the Royal Netherlands Embassy.

4. OTHER ISSUES

4.1 Future review and support missions

The proposal drafted by the consortium of ETC/IHE/IRC has been submitted to the Embassy. Content wise no comments were received from partners in Kerala that would induce a revision of the proposal. In view of the fluid situation regarding the future bilateral co-operation (KER-2), the mission has refrained from requesting GoK officials their opinion on the future role of the missions. From the GoN side the indication has been given that financially the proposal must be limited to cover one year of activities only, as administrative procedures in NEDA do prescribe so.

4.2 Co-ordination with reconnaissance mission future NAP

The Reconnaissance Mission for a future NAP programme in Kerala was fielded at the same time as the Review and Support Mission for Kerala I. Apart from the timing, the membership of both missions also overlapped, as Mr Blokland was asked to contribute to both missions. The overlap in time and/or membership of both missions is considered advantageous, as it allows for the immediate exchange of information and opinion between the missions, which should be to the benefit of both, and as a minimum, it lowers the costs of executing missions. There are no indications that the (concurrent) execution of both missions confuses or unduly overloads the Keralese or Dutch partners involved. It is the view of the RSM that the reports of both missions must be exchanged between them, and, preferably also that each mission should be invited by the Embassy to provide its comments on the other missions' report.

ANNEXES

TERMS OF REFERENCE

TERMS OF REFERENCE

Quoted from letter date 2 April 1998 from RNE, Delhi:

Contrary to the former RSM mission which was primarily to support the ongoing processes and advise where necessary, it is presently felt that a follow-up mission should have distinct review and appraisal elements in particular where SEUF's sanitation programme is concerned. As you know, in SEUF's work plan for the period 01.04.'97 till 31.12.'99 a substantial reservation of Rs. 35.835.000, = has been made of which Rs. 14.735.000, = may have been spent in the financial year 1997-'98. In the meantime, the SEUF has presented a financial proposal for 'Clean Kerala' in total amounting to Rs. 80 mln. The proposal has been drafted with the assistance by and based on the IRC mission (Mrs. Christine van Wijk) and scoping-up the support to 'Clean Kerala', meets for the time being with Netherlands' approval in principle only. Prior to taking a parallel financing proposal into consideration, we would like to review SEUF's sanitation and IEC programme against the back ground of the receptiveness and implementing capacity of the local authorities and implementing parties. The mission is therefore to concentrate on the following in particular:

- 1) The selection criteria for particular districts and panchayats, related to the districts and panchayats which have preliminary been selected for the RSM pilot project for water supply decentralisation.
- 2) The rules and regulations which govern the fund flows from RNE to SEUF, from SEUF to it's field offices, from field offices to local level authorities, from state level and beneficiaries to local level authorities and finally(?) from local level authorities to implementing parties.
- 3) The amounts which according to 2) above, were made available by the various parties to the various parties in the financial years 1996-'97 and 1997-'98 and the mode and type of financial recording maintained by these parties.
- 4) The type and frequency of financial reporting as maintained for moneys received, moneys spent, balances and restitution of these at the end of the financial year, auditing practices against physical progress made and the reporting practices of physical progress.
- 5) The responsiveness of implementing parties to money advances made, the typical time period for depleting these advances and the total of advances outstanding.
- 6) The status of SEUF's subsidy programme for latrine construction in the KER I project area's and the coastal belt ('Inter Agency Collaboration')
- 7) The inputs of SEUF in the IEC component of Clean Kerala (Nirmal 2000) and the institutional arrangements made with the administrative and implementing parties and possible other NGO's active in the same field.
- 8) SEUF's work plan for the financial year 1998-'99 and the budgetary allocations made.

9) Kerala's plan of action for Clean Kerala and the budgetary allocations made for the financial year 1998-'99 in relation to the parallel IEC financing proposal and SEUF's budget allocation.

To assist the mission in the accountancy aspects of the review, this Embassy will make available to the mission, the services of Subbash Mittal Accountants, well acquainted with the SEUF already. Subbash Mittal is scheduled to perform a routine external audit on SEUF's accounts in about the same period.

The mission will also finalise the draft proposal for a RSM project extension, communicate with the Kerala authorities on the contents of the proposal and submit the proposal to the long term planning mission (BADTO/IHE) for incorporation in the programme formulation 'step plan'.

The mission will be fielded from the 4th till the 18/19th of May '98 and the expenses be charged against the RSM budget. As soon as the arrangements have been finalised, this Embassy will formally notify the Kerala authorities.

Yours sincerely,

C.D.L. Brands
First Secretary

ITINERARIES

ITINERARY MR S. GUSSENHOVEN

- | | | |
|-----------|-------|--|
| Monday | 04/05 | - Arrival New Delhi; Briefing RNE |
| Tuesday | 05/05 | - Transfer to Trivandrum; arrival 14.00 hrs.
- First meeting SEUF; programming
- Meeting TLO |
| Wednesday | 06/05 | - Work session on Clean Kerala
- Review of workplan SEUF '97-'98
- Meeting Special Secretary to Govt. for Rural Development Dept., Mr P.K. Sivanandan and Mr Pushpangadan (CDS) |
| Thursday | 07/05 | - Further discussions on workplan SEUF
- Prep. meeting CRD officials and partners in IEC/Sanitation programme, CED
- Briefing with Mr Blokland / preparations programme for reconnaissance mission |
| Friday | 08/05 | - Reviewing Clean Kerala sanitation programme options
- Work session on workplan SEUF '97/'98
- Brief meeting with Mr Van Schayk |
| Saturday | 09/05 | - Meeting with Mr Subbash Mittal and auditors team
Reviewing management sanitation programme / SEUF internal organisation |
| Sunday | 10/05 | - Study documents / rest
- Briefing Mr Den Tuinder / programming mission |
| Monday | 11/05 | - Meeting with Technical Member KWA Board, Mr Govindankutty Nair and Managing Director KWA Mr Reddy and staff
- Meeting with auditors Mr Mittal
- Work session with SEUF director |
| Tuesday | 12/05 | - Meetings on TSU project SEUF, with Mr B. den Tuinder, Mr M. Blokland, Mr K. Namboodiri, Mr Stewart Pearson and team members SEUF
- Work session with team members SEUF and auditors
- Meeting with consultant (sanitation) Mr Paul Calvert |
| Wednesday | 13/05 | - Second meeting on TSU (follow up 12/05)
- Lunch meeting with Mr Van Schayk
- Transfer to Thrissur by train |
| Thursday | 14/05 | - Field visit TSU area, Mallapuram district
- Meeting in Kondoty, SEUF workplan training activities
- Halt Thrissur |
| Friday | 15/05 | - Transfer Thrissur to Cochin
- Debriefing with auditors Mr Mittal
- Transfer by train to Trivandrum
- Briefing with reconnaissance mission |

- | | | |
|----------|-------|--|
| Saturday | 16/05 | <ul style="list-style-type: none">- Meeting with TLO- Meeting with Director Panchayats (Local Admin. Dept)- Meeting with Spec. Sect. RDD- meeting with Man. Director and Technical Member KWA- Informal meeting Dr Balachandran Kurup- Debriefing mission members |
| Sunday | 17/05 | <ul style="list-style-type: none">- Transfer to Cochin (courtesy visit ex.director SEUF)- Report writing |
| Monday | 18/05 | <ul style="list-style-type: none">- Transfer to Mumbai- Report writing- Dept. to the Netherlands |
| Tuesday | 19/05 | <ul style="list-style-type: none">- Arrival Amsterdam 06.30 hrs. |

ITINERARY M.W. BLOKLAND

Wednesday	06/05	- Travel from Delft to Amsterdam and on to Mumbai, India
Thursday	07/05	- Travel from Mumbai to Trivandrum
Friday	08/05	- Kerala I: Discussions with KWA, DCE(Training) and Staff, on training
Saturday	09/05	(second Saturday: government offices closed)
Sunday	10/05	- Joint Mission Discussions - Kerala II: Discussions with TLO staff on Transfer of Water Supply Schemes
Monday	11/05	- Kerala I: Briefings with KWA Managing Director (Reddy) and Technical Member (Govindankutty Nair) - Kerala II: Briefing with Secretary Planning Board (Kurup)
Tuesday	12/05	- Kerala I: Discussion Pilot Project with SEU Director (Abdullah) and staff, and Project Advisor (Namboodiri) - Kerala II: Discussion with ret'd MD KWA (Mrs Krishna Veni)
Wednesday	13/05	- Kerala II: Briefing with Secretary Local Administration (Vijayanand) - Kerala II: Briefing with Mr Thomas Isaac of Planning Board, and Centre for Development Studies
Thursday	14/05	- Kerala II: Briefing with KWA MD and TM - Kerala I: Discussions with TLO on TLO staffing proposals
Friday	15/05	- Kerala II: Discussion with Secretary Resources, Finance Dept. (Abraham) - Kerala I: Discussion with EE(PMU) on Revised Estimate Mala Project - Kerala II: Discussion with Secretary Water Supply (George) - Kerala I: Discussion with KWA, TM on Water Quality Monitoring, Training, and Computerised Billing
Saturday	15/05	- Kerala I: Discussion with TLO on professional guidance TLO Office - Kerala II: Discussion with Director Panchayats (Kamal Kutty) - Kerala II: Discussion with Secretary Rural Development (Sivanandan) - Kerala I: Debriefing with KWA MD and TM - Meeting with KWA's IHE alumni
Sunday	16/05	- Kerala II: Mission Discussions - Travel Trivandrum to Delhi
Monday	17/05	- Debriefing on Kerala I and II, and discussion IHE Training Proposal with Snr. Programme Officer (Zutshi) at RNE - Debriefing Kerala I and II, and discussion IHE Training Proposal at RGNDWM (Mitra)
Tuesday	18/05	- Kerala II: Discussion at World Bank (Abhyankar) - Debriefing on Kerala I and II, and discussion IHE Training Proposal with Snr. Programme Officer (Zutshi) at RNE
Wednesday	19/05	Travel from Delhi to Amsterdam, and on to Delft

MINUTES OF MEETING ON CLEAN KERALA

No. 13787/IEC/98/CRD

Commissionerate of Rural Development,
LMS Compound,
Thiruvananthapuram.
Dated, 16th May 1998

From

The Commissioner

To

Mr. Sjef Guessenhoven,
Mission Leader

Sir,

Please find enclosed a copy of the record of discussions on the co-operation of IEC Cell and SEUF in the capacity building activities of Kottayam Sanitation Project. The modality of the co-operation in Kottayam district has been expressly spelt out therein. I hope that early action will be initiated from your end to operationalise the IEC funding.

Yours faithfully



P.K. SIVANANDAN
Commissioner

**RECORD OF DISCUSSION ON CLEAN KERALA PROJECT HELD IN
THE CHAMBER OF THE COMMISSIONER FOR RURAL DEVELOPMENT
AT 10.30 AM ON MAY 16, 1998.**

Present :

- 1) Shri P.K. Sivanandan, Principal Secretary & Commissioner Rural Development Department.
 - 2) Mr. Sjef Gussenhoven (E.T.C), Mission Leader
 - 3) Mr. Bas den Tuinder (BADTO)
 - 4) Mr. Maarten Blokland (IHE)
 - 5) Mr. Stuart Pearson (TLO)
 - 6) Mr. K. Surendran, DTLO, Kochi
 - 7) Mr. C.O. Kurien, SEUF
 - 8) Shri V. Sisupalan, Addl. Development Commissioner
 - 9) Shri. V.N. Jithendran, Consultant, IEC
1. The meeting began at 10.30 AM with Shri P.K. Sivanandan, Principal Secretary, Rural Development Dept. in chair. He said that the Task Force on IEC Strategy has presented its report which is under examination of State Government. The Task Force has proposed to set up a State Sanitation & Health Mission with the Chief Minister as Chairman. He said that final decision of State Government on the recommendations of the Task Force is expected to be taken shortly.
 2. The Mission Leader indicated the following:
 - (i) The proposal for capacity building (IEC) by SEUF in 'Clean Kerala' Programme covering five districts (Estimated budget Rs. 8 crores) will take quite some time to be processed through proper channel. A possible contribution by the Netherlands Government will be subject to assurances that funds for the construction of latrines will be made available by the parties involved as referred to in page 28 of Clean Kerala Document.
 - (ii) In the meantime some funds presently available with SEUF (around Rs. 20 Million) could be used to start capacity building activities in a way supportive to the objectives of Clean Kerala.

This can take place in the district of Kottayam as Government of India has already approved Kottayam district sanitation separately.

These limited funds can only be made available under the current project agreement with the Netherlands Embassy (SEU bridging phase upto June 1999). Hence accountability for expenditures for this budget rests with Executive Director of SEUF.

In operational terms these resources can be mobilised for the period upto June 1999 as follows:

(A) Services by SEUF to implement the IEC Component in Kottayam

(B) Contribution to RDD/IEC Cell through :-

- deputation (free of cost) of one senior professional staff member to the IEC Cell to be nominated in consultation between IEC Cell and SEUF.
- financial contribution to cover cost of one support staff for the IEC Cell.
- Some portion of the operational cost of the programme can also be covered from SEUF resources to a maximum amount which will be agreed between IEC Cell and SEUF during consultations on the operationalisation of the Kottayam Capacity Building Programme.

(iii) IEC Cell and SEUF will prepare the IEC Action Plan for Kottayam District (Nirmal 2000 Project), and prepare an estimate of the cost of implementation. To cover these costs, SEUF may make available the necessary amounts in instalments as advance to the IEC Cell. Respective expenditure statement and supporting justification documents will be presented to SEUF on a quarterly basis.

3. The Mission Leader proposed to confirm this modality for co-operation in a Memorandum of Understanding between IEC Cell and SEUF. He said that however, this can be seen an interim arrangement. In the proposal for the five district Clean Kerala Project it is envisaged to channel bilateral funds for capacity building component also direct to RDD/IEC Cell.
4. The Principal Secretary expressed his appreciation of the proposal. He indicated that the funding arrangement for future Clean Kerala Project will be worked out. If the funds for the hardware is not sufficient and subsidy has to be reduced/cut out, then the cost and technological options have to be made available to the beneficiaries through a cafeteria approach. He suggested that SEUF may consider to take up a case study on the experiences gained by the community managed water supply scheme in Olavanna.

The meeting came to an end at 12.45 PM.

P.K. SIVANANDAN
Principal Secretary
to Government

To

All participants.

**MINUTES OF MEETINGS OF THE PROGRAMME PLANNING MISSION
WITH KERALA WATER AUTHORITY**

**MINUTES OF THE MEETING WITH PROGRAMME PLANNING MISSION '98
HELD ON 11.05.1998 IN THE BOARD ROOM, KERALA WATER
AUTHORITY, THIRUVANANTHAPURAM.**

Present:

01. Dr. W.R.Reddy, Managing Director, Kerala Water Authority
02. Sri. K.G.Govindankutty Nair, TM, Kerala Water Authority
03. J.Gussenhoven, Team Leader, Review Mission, C/o Royal Netherlands Embassy, New Delhi.
04. B.A.Den Tuinder, Reconnaissance Mission, KER II, C/o Royal Netherlands Embassy, New Delhi.
05. M.W.Blokland, Review and Reconnaissance Mission Member
06. Sri.C.R.Mohan, Chief Engineer(NR), Kerala Water Authority, Kozhikkode.
07. Sri.R.Ramanujam, Chief Engineer(PS&GL), Kerala Water Authority, Thiruvananthapuram.
08. Sri.M.Ganesan, FM&CAD, Jalabhavan, Thiruvananthapuram
09. Sr.S.Karthikeyan Achary, Dy.Chief Engineer(Trg), Jalabhavan, Thiruvananthapuram.
10. Sri.N.V.Raja Raja Varma, PA to Superintending Engineer, PH Bilateral Circle, Thrissur.
11. Sri.P.P.Johny, Executive Engineer, PH Pavaratty Dn, Kunnamkulam.
12. Sri.K.Vijayakumaran Nair, Executive Engineer, O/o CE(IPD), Kochi
13. Mr.S.P.Pearson, Technical Liaison Officer, O/o CE(IPD), KWA, Kochi.
14. Sri.M.Mohammed Basheer, Executive Engineer(HRD), KWA, Thiruvananthapuram
15. Sri.S.Ratheesh, Asst.Executive Engineer, WQM, Thrissur-5
16. Sri.K.A.Abdulla, Executive Director, SFUE, Thiruvananthapuram.

At the outset the Managing Director extended a hearty welcome to the Mission Members.

In the introductory remarks the Managing Director said that eventhough he has not gone fully into the field activities of the ongoing projects, he had inspected the BAWSS to Kundara recently and is hopeful of achieving the project completion within the agreed period of 31.12.1998.

In the Pavaratty scheme there are some technicalities to be resolved at higher levels considering the change in the scenario at the intake point in view of sanctioning of Velliankallu Regulator. However this will be considered in due course.

The Managing Director appreciated the continued support from the Royal Netherlands Embassy. Mr. Gussenhoven explained briefly his areas of activities and role in the present Mission. The Technical Member drew the attention of the Mission to the omissions/mistakes in the extract of the last Mission report KER-8, January 1998 page B "Pavaratty B" wherein it is noted that "no staff present" even though the meeting was attended by the concerned personnel of KWA.

Mr. Gussen Hoven promised to make necessary corrections and assured to avoid such instances in future.

On enquiry by the Managing Director about the scope of KER-II, Technical Member explained briefly the project KER II right from its stage of inception to the present status.

After these preliminary discussions, detailed itemwar discussions on the topics covered under KER-8 was taken up.

1. COMPUTERISATION OF REVENUE COLLECTIONS

The FM&CAD explained the computerisation project implemented under Royal Netherlands Embassy's aid. By utilising Rs.27 lakhs already received from Royal Netherlands Embassy, computerisation in Thiruvananthapuram and Kochi Divisions had been completed. The last Mission had visited these areas. FM opined that by computerisation there is improvement in revenue collections. The system installed in Kochi has to be updated and will be made full fledged by 01.07.1998. The process is complete in one subdivision in Thiruvananthapuram.

The Managing Director appreciated the goodwill of the Royal Netherlands Embassy in extending financial aid in this field and he enquired whether we can extend these facilities to all Municipalities and Towns. The Technical Member reminded the commitment in this regard in the Legislative assembly that computerisation billing collection will be introduced in Kozhikkode shortly. The Managing Director authorised the Finance wing to prepare a proposal for introducing computerisation in all districts within two weeks so as to discuss further on the matter with Royal Netherlands Embassy for continued assistance. Mr. Blokland pointed out the limitations of Kerala Water Authority in introducing Tariff revision and urged the necessity on improved revenue collections. He further mentioned about their commitment in facilitating the strengthening the resource base and required strengthening of system for achieving it. The Managing Director opined that KWA is fully aware of this fact and he explained that a concerted effort is in the offing to bring ways the revenue sources and seal the leakages after the onset of monsoon.

It was decided to present concrete proposals for all the districts covering all the areas required, after due process of consultations in KWA.

2. WATER QUALITY MONITORING

The Technical Member explained the activities of the pilot project implemented under Netherlands Assistance. The Pilot project was set up mainly to identify the areas where the Water quality monitoring is needed. Before the completion of the project KWA has set up district level laboratories under the state Plan. Further in the National workshop held in New Delhi there was a suggestion of bifurcation of WQM and surveillance activities and involving Health Department in surveillance. In the wake of National Policy and considering the limitations in getting additional posts sanctioned from Government of Kerala, it has to be decided whether we may go ahead with the National Level Policy. Mr. Blokland suggested that there are lot to be done interms of WQM and infrastructure facilities. He further added that intervention in WQM will not only gets limited to establishing lab but also upgrading/rehabilitating the schemes so as to achieve desired quality standards. For this a district can be selected, details of which can be worked out. Technical Member mentioned about the prospects of handing over small schemes to local bodies as per the Sen Committee report, in which case the control of these will not be vested with KWA.

At this point Mr. Blokland informed that during his last discussion with RGDWM it was clarified that the WQM/Surveillance will be left with KWA.

The Managing Director added the need for creating facilities such that any consumer can get a water sample tested, at any time. Managing Director opined to seek the help in upgrading our present lab facilities. It was decided to have further consultations to finalise the districts in which the effort can be made.

3. TRAINING COMPONENT

The Dy. Chief Engineer (Trg) explained the three training modules under the NHRD Programme implemented under Government of India Assisted Projects and pointed out KWA's commitment to adhere to the GoI's direction.

Regarding the Training proposal of 'Vanitha Samithy, Managing Director and Technical Member pointed out that Kerala Water Authority cannot limit any training module to one particular section. Any proposal can be considered in general perspective, and if needed corrective steps will be

taken to eliminate imbalances and make the programme purposeful and effective.

Mr. Blokland suggested their intention to make the programme more effective by way of technical assistance assessing the training impact on the trainees etc. Managing Director disagreed any idea of parallel system but welcomed the idea of strengthening the existing training facilities and he directed the training wing to assess the areas where we need help/support.

4. ONGOING PROJECTS

The Managing Director assured the Mission that all steps will be taken to complete the Kundara scheme within the agreed time. The technical problems will be sorted out and the progress will be closely monitored by the Managing Director himself. On enquiry it was informed that adequate budget allocation is provided for NAP schemes in the current year budget.

Regarding Pavaratty scheme, Mr. Blokland raised apprehensions over two issues. (1) Laying of river bed pipe line and (2) scope of the scheme once the regulator is commissioned. It was informed that directions had been given to Chief Engineer(NR) to strengthen the existing pipeline before the onset of the monsoon.

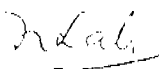
Regarding the regulator MD and TM assured that even after the completion of the regulator, drinking water will be given utmost priority as per the National water Policy. KWA will take up this issue at appropriate level and the scheme implementation will not be hampered.

It was decided to have debriefing sessions on 16 May at 3.00 pm. The Managing Director thanked all the participants for their co-operation.

The meeting concluded at 12.30 pm.

Sd/-
Managing Director

Approved for issue/By Order


Executive Engineer (PMU)

MINUTES OF THE MEETING HELD IN THE CHAMBER OF THE MANAGING
DIRECTOR AT 10 AM ON 14.05.1998

Present:

01. Dr. W.R. Reddy I.A.S, Managing Director, Kerala Water Authority, Thiruvananthapuram.
02. Sri. K.G. Govindankutty Nair, Technical Member, Kerala Water Authority, Thiruvananthapuram.
03. Mr. Maarten. W. Blokland, Member, KER II Reconnaissance Mission.
04. Mr. B.A. Dan Tuinder, Member, KER II Reconnaissance Mission.
05. Sri. R. Ramanujam, Chief Engineer (PS&GL), Kerala Water Authority, Thiruvananthapuram.
06. Mr. Stuart. P. Pearson, Technical Liaison Officer, O/o CE (IPD), KWA, Kochi.
07. Sri. K. Surandran, Dy. Technical Liaison Officer, O/o CE (IPD), KWA, Kochi.

Mr. Dan Tuinder opened discussions illustrating the objectives of the Mission w.r.t KER II context. He stated that the present Mission is a Reconnaissance Mission. He added that the draft formulation report of KER II released in 6/97 is yet to be finalised. This report duly approved by the Task Force has to be presented to the Embassy through Government of Kerala/Government of India. It was also pointed out that eventhough KER II is not a continuation of KER I, Embassy would like to have the support without much gap while phasing from KER I Project.

He briefly explained the context in which a different approach was taken in the formulation of KER II. The project KER I was launched during the Inter National Water Decade period 1980 to 1990. But it could not be completed in full shape in time to achieve the stated objectives. He also pointed out that the donors are concerned with not only the completion of the schemes but also its operational and financial sustainability, and accordingly expressed the anxiety in not taking decision of tariff revision. This leads to wide gap in revenue collection and O&M cost and thus leading to poor service. He added that this had much relevance to Kerala, where issues like tariff revision are very sensitive.

With due reference to the findings in the International Workshop he urged the need to put more emphasis on developing the traditional sources to keep the systems both technically and financially sustainable.

Mr. Dan Tuinder appreciated the change in the sector policies in the State since the commencement of the project formulation activities in 1995. This change in scenario should also be considered while finalising the report. This Mission creates an opportunity to evaluate the latest

developments considering all these aspects particularly since it is felt that earlier there was certain resistance in adopting traditional sources. He informed that the Planning Board has well taken care of all these aspects and the modified draft is on the anvil.

Mr. Blokland opened discussion stressing that schemes should be maintained operationally and financially in sustainable manner. He opined that input should be made with the objective to deliver maximum services which in turn will generate enough income to make the schemes sustainable. He pointed out that KER I had some flaws which led to the undue time and cost overruns in the schemes coupled with the limited autonomy exercised by Kerala Water Authority. There is wide gap between demand and collection in Revenue. Considering all these aspects KER II was launched in a different perspective.

As requested by the Managing Director, the Technical Member made the following remarks on the above views of the Mission members. He admitted that there was certain flaws in KER I, which may be attributed to learning phase of KWA and insufficient experience in contract management, periodical transfer of project implementing officers etc. It was also pointed out that KWA has taken up these things during a period when the organisation was in its infant stage as an Autonomous body. This was complicated with the limitations in material procurement and delay in land acquisition etc.

Technical Member also pointed out that even though the 73rd and 74th amendment made Water Supply as a statutory responsibility of the local bodies, Kerala Water Authority was not given any clear cut direction with stipulated guide lines until quite recently. He elaborated the activities initiated in this respect from KWA's side including arranging a one day discussion at Thiruvananthapuram and a two days workshop at KILA, Thrissur which was attended by high officials from Government, KWA, Planning Board and the Hardcore activists of decentralised planning. Elaborate discussions were held with delegates from local bodies and a basic guide line was drawn up which was further streamlined in the Minister's conference on 02.03.1998 and GO (MS) No. 29/98/Ird dt. 19.03.1998 was issued demarcating the areas of activities of KWA and local bodies. Now that clear boundaries for operations have been suggested he pointed out that KER II may have very little involvement of KWA and more from the local bodies.

The Managing Director/Technical Member cleared the points and stated that the local bodies had to act in accordance with presented norms issued by the Government of Kerala w.r.t all aspects including tariff. The Mission expressed their interest in the recent development.

Secondly the Managing Director opined that KWA has not discarded the traditional sources and it is fully aware of the fact that this organisation cannot depend on piped water supply schemes alone to cover the entire population. But the adaptability of the traditional sources as potable water should be well taken care of particularly in Kerala context where the density of population is very high. In the coastal and urban conglomerations, there is no alternative to piped water supply. The Managing Director also drew the attention of the Mission on the inadequacy of sources/ degradation problems being faced by many of the ongoing schemes. eg. Sasthamcotta lake.

The Managing Director remarked that there were certain adverse comments against KWA and the same shall be sorted out soon. It is aimed to prepare the modified draft report by the end of June 1998.

Technical Liaison Officer expressed satisfaction over the constructive discussions. He also opined that the report had not identified any of the areas of success or the limitations of the organisation while raising these criticisms. He appreciated the new MD's efforts in getting finalised modified reports at the earliest.

The Mission pointed out that even though KER II is not a continuation of KER I the Embassy would prefer to carry on its support so as to maintain continuity. It is hoped that the KER II report will reach Embassy by the end of this year routed through proper channel.

sdh
Managing Director

Approved for issue/By Order

mlal
Executive Engineer (PMU)

MINUTES OF THE DEBRIEFING SESSION HELD IN THE CHAMBER OF
MANAGING DIRECTOR ON 16.05.1998

Present:

01. Dr.W.R.Reddy, Managing Director, Kerala Water Authority.
02. Sri. K.G.Govindankutty Nair, TM, Kerala Water Authority
03. J.Gussenhoven, Team Leader, Review Mission, C/o Royal Netherlands Embassy, New Delhi.
04. B.A.Den Tuinder, Reconnaissance Mission, KER II, C/o Royal Netherlands Embassy, New Delhi.
05. M.W.Blokland, Review and Reconnaissance Mission Member
06. Sri.K.Surendran, Dy.TLO, O/o CE(IPD), KWA, Kochi.
07. Smt.N.Lalithambika, Executive Engineer(PMU)

The debriefing session further discussed the minutes of the meetings held on 11.05.1998 and 14.05.1998 and the following points were clarified.

1.WATER QUALITY MONITORING

The Mission members shared their views on the proposed role of Kerala Water Authority w.r.t WQM/surveillance of the various schemes on the wake of the recent developments in the sector.

The Managing Director/Technical Member clarified the various queries raised by them.

It was further decided tentatively Thrissur district as a pilot district to implement the recommendations of the consultants, subject to final approval of the Government.

Mr.Blokland suggested that since the quantum of work involved in this is considerably great the Kerala Water Authority personnel will be assisted by the Project Co-ordinator who is proposed to be engaged for the Pavaratty scheme. This was agreed in principle by the forum and Mr.Blokland agreed that he may appraise the Royal Netherlands Embassy accordingly.

2.TRAINING

Regarding the implementation of the proposal as mentioned in KER-8 Mr.Blokland stated that the Embassy was on the assumption that the proposal will materialise by early 1999. Accordingly Technical Liaison Officer had proposed the

appointment of a Co-ordinator. But Managing Director emphasised that the input of Royal Netherlands Embassy in this field may be taken in wider perspective. The Training component of Kerala Water Authority as a whole has to be considered. He also suggested to have the HQ of the Co-ordinator in training in Thiruvananthapuram.

Managing Director further added that after the meeting on 11.05.1998 with the Mission he made an internal assessment on the training activities of Kerala Water Authority and opined that there are lot of gap to be filled up which requires more time. It has also been decided to prepare separate modules for each type of training conducted. The Managing Director explained various measures proposed to be taken up for improving the present training programmes which will be introduced in a phased manner.

Mr. Blokland also opined that training centre should be equipped with well trained/specialised trainers who has aptitude in training and be headed by a Director who has the autonomy to retain the staff as being done in the Institute at Gujarat.

Blokland suggested that the services of the present Technical Liaison Officer Mr. Stuart. P. Pearson who is well experienced in this field can be utilised. He also suggested that the Technical Liaison Office can actively participate in this area. Managing Director assured to consider this aspect as well.

3. COMPUTERISATION

Regarding the computerisation proposal Mr. Blokland expressed apprehensions on the magnitude of the proposal to cover the entire organisation. Managing Director suggested that this is the ultimate intention of Kerala Water Authority which can be taken up in a phased manner.

The Technical Member invited the attention of the Mission on the studies conducted and the paper prepared by Mr. Haris (Asst. Executive Engineer, KWA) on "Time overruns in materials procurement of Kerala Water Authority- A study on procedures of practices". He explained that even though no technical study had been conducted on this, the paper throws light on the delays in the procurement and consequent effects.

The Managing Director/Technical Member emphasised the need to have a detailed technical evaluation in this field. Mr. Blokland agreed to float this suggestion for consideration of the Royal Netherlands Embassy.

Mr. Blokland also pointed out the direction from the Royal Netherlands Embassy requesting Mr. Blokland and Mr. Stuart Pearson to appraise the 2nd revised estimate of Mala Water Supply Scheme. Mr. Blokland informed that they had preliminary discussions in this regard with PMU section and a programme has been fixed to have detailed appraisal by the TLO office.

It was also suggested by the Managing Director that the decisions taken in this concluding meeting be kept in the next Authority.

The following amendments are also suggested and approved to be made in the minutes of the meeting held on 14.05.1998. (original text in italics and amendment in bold).

1. Last line of the first para.

It was also pointed out that even though KER II is not a continuation of KER I, Embassy would like to have the support without much gap while phasing from KER I project.

*It was also pointed out that even though the proposed KER II is not a continuation of KER I, Embassy **might** like to have the support without much gap while phasing from KER I project.*

2. Last line of the last para.

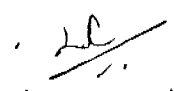
*It is hoped that the KER II report **will** reach Embassy by the end of this year routed through proper channel.*

*It is hoped that the proposed KER II report **may** reach Embassy by the end of this year routed through proper channel.*

The Managing Director thanked all the participants and the meeting concluded at 2.30 pm.

Sd/-
Managing Director

Approved for issue/By Order


Executive Engineer (PMU)

23/5

EVOLUTION OF SUBSIDIES TO SANITATION PROGRAMME SEU, KER-I

6. STATUS OF SEU'S SUBSIDY PROGRAMME IN KER- I PROJECT AREAS

Sl No	Name of Panchayath	Year	Status of seu's Subsidy	No of Units Constructed	Present Situation	Remarks
1	Cheriyannadu	1988	75%	2352	Completed(96-97)	Only Token contribution from Pt. (Rs. 60,000)
2	Thrickunnappuzha	1991	75%	2082	Completed(96-97)	Only Token contribution from Pt. (Rs. 70,500)
3	Koipuram	1993	75%..60%	721	Completed(96-97)	
4	Kizhuvilam	1991	75%	1137	Completed(96-97)	Only Token contribution from Pt.
5	Chirayinkeezhu	1993	75%..65%	1283	Completed(96-97)	
6	Vakkam	1991	75%	305	Completed(95-96)	Only Token contribution from Pt.
7	Kadackavoor	1993	75%	388	Completed(94-95)	Only Token contribution from Pt.
8	Anjengo	1988	75%	1000	Completed(95-96)	Only Token contribution from Pt.
9	Azhoor	1993	75%..35%	961	130 Nos.ongoing	
	" (untied fund)	1994	60%	78	Completed(94-95)	
10	Kundara	1988	75%..70%	616	Completed(91-92)	
11	Kulackada	1995	65%	500	Completed(95-96)	
12	Pavithreswaram	1994	65%..30%	792	350 ongoing	with 30% subsidy
13	East Kallada	1995	65%..50%	525	8Nos. ongoing	With a fixed subsidy of Rs.1550
14	Neduvathoor	1995	65%..28%	398	152 Nos. ongoing	With a fixed subsidy of Rs.1000
15	Perayam	1995	65%..50%	288	150 Nos. ongoing	
16	Ezhukone	1997	65%	65	Completed(96-97)	
17	Mala	1988	75%..60%	1716	Completed	
18	Puthenchira	1991	75%..60%	1458	""	
19	Vellangallore	1991	75%..60%	2284	""	
20	Poyya	1992	Plinth level	1665	""	
21	Kuzur	1994	75%..60%	616	""	
22	Annamanada	1995	75%..33.3%	783	""	
23	Valappad	1991	75%..40%	1721	""	
24	Vatanappilly	1994	45%..40%	937	Ongoing 2	
25	Edathuruthi	1988	75%	1517	Completed	
26	Kaipamangalam	1991	75%..40%	1602	Ongoing	
27	Engandiyoor	1991	75%..40%	1091	Completed	
28	Perinjaram	1992	75%..60%	791		Work stopped.
29	Mathilakom	1994	75%..40%	1012	Ongoing 4	
30	Thalikulam	1995	75%..60%	646	Completed	
31	S.N.Puram	1994	75%..60%	276	Completed	
32	Nagalassery	1994	60%..40%	714	Completed	
33	Punnayoor	1995	60%..40%	633	Ongoing 210	
34	Chalissery	1996	60%..40%	448	Ongoing 219	
35	Thirumattacode		40%	509	Completed	
36	Kadavallur		40%	86	Ongoing 103	
37	Kadappuram	1997	40%	282	Ongoing 133	
38	Perumpadappu	1997		623	Ongoing 312	
39	Thanur	1997		1600	Ongoing 400	
40	Irimbilium	1996		548	Completed	

Inter Agency/Coastal Area

1	Sakthikulangara	1996	40%	450	Completed(97-98)	
2	Chavara	1996	40%..14%	448	251Nos. ongoing	With Rs.500 (14%) subsidy only
3	Neendakara	1996	40%..30%	200	100Nos. ongoing	With 30% subsidy only
4	Theckumbhagam	1996	40%	150	Completed(97-98)	
5	Thevalackara	1996	40%	340	Completed(97-98)	
6	Oachira	1996	40%..34%	331	34 Nos. ongoing	with 34% subsidy
7	Mayyanadu	1997	34%	53	1No. ongoing	
8	Poothakulam	1997	34%	6	28Nos. ongoing	
9	Eravipuram	1997	34%	1	67Nos. ongoing	
10	Perinad	1997	34%	69	1No. ongoing	
11	Alappadu	1997	34%	85	215Nos. ongoing	
12	Clappana	1997	34%	100	Completed(97-98)	
13	Thrickaruva	1997	34%	0	153Nos. ongoing	
14	Mantrothuruthu	1997	34%	0	15Nos. ongoing	
15	Kulasekharapuram	1997	34%	18	38Nos. ongoing	
16	Malsyafed, Kollam	1997	34%	243	8Nos. ongoing	
17	Matsyafed (Eriyad)	1993	25%	913	Completed	
18	Edavilangu	1995	25%	138	Completed	

FUNDS TRANSFERED TO PANCHAYATHS

FUNDS TRANSFERED TO PANCHAYATHS (Trichur/Calicut/Kollam/Vaikom)

Sl.No.	Panchayath	1-4-96 to 31-3-97	1-4-97 to 31-3-98	G. Total
(Trichur)				
1	Thalikkulam	475000		475000
2	Valappad	765000		765000
3	Kaipamangalam	387000	742000	1129000
4	S.N.Puram	50,000		50000
5	Vatanappally	334900		334900
6	Mathilakom	297000		297000
7	Annamanada	258000		258000
8	Vellangalloor	203642		203642
9	Mala	246000		246000
10	Thirumattakode	297000	50000	347000
11	Kadavallloor	297000		297000
12	Chalissery	195000	198000	393000
13	Engandiyoor		100000	100000
14	Nagalassery		250000	250000
15	Punnayoor		400000	400000
16	Jeevapooma		400000	400000
Total		3805542	2140000	5945542
(Calicut)				
17	Perumpadappu		144992	144992
18	Thanur		1400000	1400000
19	Irimbilium	767200		767200
Total				2312192
(Kollam)				
		1996	1997	1998
20	Chirayinkil	700000		700000
21	Anjengo	12500		12500
22	Azhoor	50000	400000	500000
23	Azhoor (JRY)	18000		18000
24	Cheriyanaad	17500		17500
25	Thrikkunnapuzha	782000		782000
26	Koipuram	140000		140000
27	East Kallada	203480	90000	293480
28	Pavithreswaram	300000	268000	568000
29	Neduvathoor	135000	250000	385000
30	Perayam	350000	150000	500000
31	Mararikulam	400000		400000
32	Ezhukone	100000	100000	200000
Coastal area:				0
33	Thevalakkara	560000		560000
34	Thekkumbhagam	230000	10000	267600
35	Oachira	500000	31200	570800
36	Chavara	3000000	251400	3251400
37	Neendakara	320000	5700	325700
38	Sakthikulangara		720000	792000
39	Mayyanad		64800	64800
40	Matsyafed		489450	489450
41	Pennad		84000	84000
42	Clappana		120000	120000
43	Kulasekharapuram		67200	67200
44	Poothakulam		40800	40800
45	Thrikkaruva		50000	50000
46	Iravipuram	130000		211600
47	Alappad		200000	200000
48	Mandrothuruthu		18000	18000
Total		7948480	3101750	579600
49 Vaikom Block Pt.			500000	500000
G. Total				20387564