

# Impact Assessment Report

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## **Foreword:**

The “Water and Energy Audit and Water Conservation Practices” training course for the technical and executive personnel of the urban local bodies was held in Mumbai and Pune under the banner of SIUD as a part of KMRP training programme.

The requirements of the training included a third party evaluation in two stages viz. (i). Concurrent evaluation to effect any mid course correction and (ii). Impact assessment of the training to assess the results of the training on the field.

The third party evaluation was entrusted to Centre for Urban and Rural Infrastructure Planning Enterprises, Bangalore (CURIPe). CURIPe expresses its thanks to SIUD for entrusting the task of third party evaluation for the course on “Water and Energy Audit and Water Conservation Practices”.

CURIPe attended the training programmes at Mumbai (From 22<sup>nd</sup> November to 25<sup>th</sup> November 2010) and Pune (From 30<sup>th</sup> May 2011 to 2<sup>nd</sup> June 2011). The concurrent evaluation report was submitted to SIUD and a powerpoint presentation was also made at KUIDFC, Bangalore. As observed in the concurrent evaluation, a mid-course correction was made by reducing the theoretical input and increasing concentration on technical input.

Later, a questionnaire was prepared under the able guidance of Shri. Shivasali, Director, SIUD and course Co-ordinator Shri. R. N. Achyutha, Project Co-Ordinator, KMRP, SIUD. The questionnaire was in 5 parts Viz. A,B,C,D &E. Part A was on “Personal Data”, part B was on “Training Impact”, Part C was on “Post Training Impact”, Part D was on “Suggestions and Improvement” while Part E was on SIUD itself.

The questionnaires were issued to twenty selected participants but only eight participants sent in their filled in questionnaires. Five participants were personally contacted and their reactions on the training programmes was gathered. The analysis and interactions have revealed almost the same reactions which has been recorded in the report.

The interim report and the Powerpoint presentation (PPT) was presented to SIUD on 06.02.2012. During the presentation, Ms. Amita Prasad, IAS, Director General, ATI, Shri. Shivasali, KMS,

Director, SIUD and Shri. R.N. Achyutha, Project co-ordinator, KMRP, SIUD and Prof. N.N. Sastry, SIUD were also present.

Very valuable advise was given by the Director General on the interim report submitted and instructed to finalise the report . CURIPe has finalized the report.

CURIPe profusely thanks for the support, guidance, advise and appreciation offered by the Director General, ATI in compiling the report.

CURIPe also takes this opportunity to thank the Director, SIUD and the Project Co-ordinator, Shri. R.N. Achyutha, KMRP, SIUD for their constant advise and support in compiling this report.

CURIPe also thanks everyone who has directly or indirectly assisted in compiling this report and also thanks all the participants who responded spontaneously in returning the questionnaires and for co-operation in interactions without whose co-operation the analysis would not have been complete.

Director – Technical  
CURIPe  
Bangalore

# **Impact Assessment Report**

## **1. Introduction**

This final report is a follow up of the interim report already submitted. The report is compiled on the basis of the response received from the participants both through questionnaire and personal interaction. In this report the inference on the basis of the eight questionnaires and interaction with five participants is drawn. The trend of analysis indicates almost the same type of replies. The final report does not differ much from the interim report already submitted..

The list of participants selected for the impact assessment is enclosed as Annexure 1 and the participants who have responded is highlighted.

## **2. Analysis of the Questionnaire**

The questionnaire itself is in five parts viz. Part A, Part B, Part C, Part D and Part E. Part A concerns training preparation, Part B concerns Training Impact, Part C concerns Post Training Impact, Part D concerns suggestion on Improvement and Part E concerns about SIUD. The questionnaires have been analyzed part wise.

### **2.1 Analysis.**

#### **<I> Part A**

Part A calls for response on the intimation for the course, the supply of course material and the response of the Superiors in deputing the course.

All the participants have responded in the positive for preparatory data 2(a) to 2(d). As the course material was supplied at the venue, there was no chance of preparing for the course and come prepared.

#### **<II> Part B**

This part deals with the Training Impact.

The questionnaire reveals that the understanding of the subject was good by the technical personnel whereas for the administrative participants the understanding ranged from poor to good before the training. After the training their knowledge ranges from good to very good.

The training has helped them in understanding;

- a. The new technology
- b. New ideas and
- c. Usage of Instruments.

In general, some of the participants who were in earlier courses have said the course was too theoretical whereas participants from the later courses have said that it was not too theoretical. This could have been due to mid course correction suggested in the concurrent evaluation report.

As far as additional topics that required to be covered some of the participants have listed the following topics;

- a. Solid waste management (SWM)

This subject is covered under SWM training course. Hence, this may not be needed in Water and Energy Audit course.

- b. Pipe line leakage detection instruments and their cost.
- c. Details on UGD plans and topics.
- d. Equipment for water and energy auditing.
- e. Efficiency of pumps.
- f. Efficiency in street line lightings.
- g. Technology best suited for local bodies.

All the participants have expressed satisfaction on the quality of inputs given by the resource persons.

### **<III> Part C**

This part deals with the post training impact and the application of knowledge gained.

At the outset it has to be mentioned that some of the participants have been shuffled out of their present post and have been placed in charge of other duties and as such right now they many not have the opportunity to apply their knowledge fully.

However, all of them are confident of implementing the action plan. In the case of Hassan ULB, as a beginning, tenders have been called for water meters so that all domestic usage of water can be metered. They have also expressed that there is lack of skilled staff, lack of proper instruments and lack of consistent water supply. Some have expressed administrative difficulty also.

#### **<IV> Part D**

This part in fact is very important since it seeks suggestions of improvement from the participants themselves.

Most of the participants have sought improvement in the course. They have suggested the following inclusions.

- a. More on-field exercises.
- b. Usage of instruments on field
- c. Operation and maintenance.
- d. Bad examples in reality

As regards to preparation of the base for water and energy auditing, the response is poor. However, some participants have expressed capability of mapping of pumping and distribution lines, detect water leakage points and rectify and also prepare an estimate for basic issues on water loss and prevention.

The response regards to completion of the base for water and energy audit only one has responded and has said he could complete it in three months.

#### **<V> Part E**

This part refers to the performance rating of SIUD. All the participants have expressed satisfaction over the training schedules formulated by SIUD.

Almost all have expressed need for improvement in sessions and resource persons connected to it. They have desired sessions in the following fields;

- a. Case studies on water laws
- b. Legislation on water laws
- c. More field exercises tackling specific problems.

As far as requirement of advanced training courses the participants response has been on the following fields.

- a. Water conservation
- b. Water audit
- c. Recycling of water
- d. Leakage control
- e. More relevant group exercises and  
Role Plays

### **3. Interactions with participants:**

The organizing of actual interaction has been a tough. Many of the participants are under pressure of work and are required to attend meetings at Bangalore. It has also happened that a participant had been called for an urgent meeting at Bangalore and had to be away when actually visited. It is felt that more time is required for personal interactions.

At present, participants have been met at Hassan and Mysore and K.G.F. The responses have been almost the same as in the questionnaire. In Hassan, the participant has been transferred from water section to street lighting. However, she has been able to push through a tender for providing water meters for domestic usage in Hassan CMC limits. The photographs of interaction are annexed at the end.

### **4. Evaluator's Inferences and Enumeration of findings:**

#### **4.1 Inferences**

The following inferences can be drawn from the analysis of the questionnaires and interactions.

- (i) The response in the questionnaire has not been consistent when compared with the analysis of the questionnaire of other parts. Some responses have been cursory. Some responses have not been marked. But, most importantly the suggestions part has been give a thought and appropriate suggestions have been given.
- (ii) All the participants are satisfied with SIUD schedule.
- (iii) There has not been much problem in getting the necessary orders for participants. However, as the course material has not been issued in advance, the participants have not been able to come prepared.
- (iv) During interactions, the participants felt that the technical person in the particular field, the Executive head and the president of the ULB should be deputed together so that on field and administrative problems could be discussed and a plausible solution found.
- (v) In the courses to come, an all out effort has to be done so that all the concerned are deputed to the course and course material or at least the course schedule is sent to the participants well in advance so that the participants can come prepared with their problems and discussions.

This could be done if and only if SIUD itself is vested with powers of selection of candidates and is also empowered to take suitable action on the concerned official in the batch who misses the course.

- (vi) Action plans should be action based. The action plan prepared by the participants, with its local modifications, should be given an opportunity for implementation. This also means that the participants should be given atleast 4 quarters to implement the

action plan by placing it before the council, demand for funds and human resources, prepare the basics for a water and energy audit.

This can be possible only if the participants are not transferred for at least 18 months.

It is then best that an impact assessment is carried out. It also gives a seriousness to the participants.

- (vii) More importance should be given to solve local problems through group exercises and role plays. In effect, it is a suggestion that the course content be modified. The modification should contemplate on the inclusion of the additional issues suggested by the participants. The issues being water conservation, water laws, leakages control and actual field work.



## **4.2 Enumeration of Findings**

The findings of the concurrent evaluation and Impact Assessment are enumerated under the following heads.

- a. Logistics and Schedule
- b. Take a ways
- c. Skill and knowledge gains
- d. Peer learning

### **a. Logistics and Schedule**

In this section, logistics on training is enumerated. The enumeration lists both the plus and minus points. The evaluator's remarks are also given regarding the plus and minus points.

### **b. Take a ways**

In this section, take aways in the form of write ups, Govt. Orders and study material including library facilities is dealt.

### **c. Skill and Knowledge gains**

In this section, the skills gained are enumerated. Also, based on the participants interaction during concurrent evaluation and also during impact assessment, their suggestions and requirements are enumerated. This section also details the knowledge gained during training and its impact after training and during application on field. This is also based on the interactions with the participants during training and also during interactions while assessing impact.

For clarity and brevity the above issues are given below in the form of a table.

Field	Sl. No	Details/Issues	Adequacy	Remarks
Logistics and Schedule	1	Relief Ease and difficulties	Generally, the participants were quite comfortable in the relieving process except for some minor problems due to paper work in their offices which caused some travel arrangements problem.	
	2	Training Centre	Of the two trainings, for which concurrent evaluation was done, one was at Mumbai, INLOGOV and the other in Pune at the conference hall of a hotel. The training facility at Mumbai was adequate while at Pune it was not that adequate. At Pune, no library facilities were available.	As the training Institute at Pune was under renovation, it is learnt, the training venue had to be shifted to a hotel. The hotel was not that adequate to hold training sessions of technical nature. It was more a conference room.
	3	Boarding and Lodging	Adequate	Though some participants have said that the accommodation and boarding facility should be better, it is felt that much importance need not be attached to it as the basic facilities were quite satisfactory and comfortable too. The lodging was comfortable and the breakfast, meals on between sessions tea and night dinner were adequate.
	4	Training Schedule	As far as the Schedule is concerned, the timing were comfortable	-
	5	Course Material	The course material was adequate as far as the training schedule subjects were concerned.	As the course material was distributed at the training centre, the participants felt that they could not be prepared or be aware of the type of training. It is felt that if at least the course schedule is sent to the participants, they can come prepared. The course material can be issued at the training centre. A few observations are recorded a. The course schedule atleast should be circulated to the participants so that they can come prepared with local problems.

				<p>b. It may be made mandatory by SIUD that the participants bring their local problems connected with the inputs referred in the training schedule for discussion and possible solution.</p> <p>c. SIUD should be in total control of selection of participants so that all the personnel connected to the particular training in the ULB are deputed simultaneously. For eg: The Chief Executive of the ULB, the Engineer connected with the Water supply operation and maintenance and the elected representative. This will help in better understanding of the local problems and solutions for them.</p> <p>More accent should be given to group discussion and role plays in solving reality situations.</p>
Take Aways	1	Soft copies of powerpoint presentation	The soft copies are adequate and very informative	The soft copies contain the presentations on water purification, instruments, RWH and some theoretical aspects. The soft copies form a good reference and can be applied in given situations.

Skills and Knowledge gains	1	Sessions	The sessions were adequate as far as the subjects dealt are concerned. Many participants were very happy with the usage of instruments. Also, the visit to Malkapur Water project inspired the participants and many were keen to know more about the project acceptance and permission. The interaction with the person who was responsible for the project was very fruitful. The participants felt inspired to replicate such a project.	More on field exercises could be formulated and usage of instruments on site could be arranged. It could be useful if sessions and visits on recycling of water and its usage could be included as part of the training. Also, probably introduction of case studies on water laws and legislation on water laws could be part of the session.
	2	Application on field	Participants felt that this could be improved. Also, if they are given sufficient information they could come prepared with their local problems. Similarities could be explored / studied.	More on field problems and group discussions and role-plays could be formulated. One of the participants took initiative to introduce water meters. The subject was considered in the ULB and positive decision taken.

#### **d. Peer Learning**

Peer Learning is an educational tool. Here peers interact with each other in order to learn from each other. It could be on-line or face-to-face. In this context, here in this course, such an exercise has not been undertaken between peers.

“Active Learning” presents great opportunities to participants to discuss issues amongst themselves. It is co-operative learning which can help solve complicated field problems. Hence, it may be very positive stride if the participants are informed to come to the training venue with “PRACTICAL FIELD PROBLEMS” so that they can be discussed not only amongst themselves but also with the “Peers” of different sessions.

Peer learning strategies are quite a few. But, in the context of training the participants from the ULBs and other likewise agencies the best strategies would be either “Solution and Critic groups” or “Teach –write-discuss” or both. These will have to become part of the curriculum.

Critique sessions, role-plays and case studies will enhance the quality of enrichment of knowledge of both the participants and the peers.

“Positive interdependence” and “group accountability” will emphasize the efforts of the group members. It also provides an opportunity for the participants to make use of the library facilities also. This has been highlighted elsewhere also.

Peer learning activities should be framed into the course curriculum to buildup on,

- (a) Team Spirit
- (b) Social Competence and Communication Skills  
and
- (c) Greater Productivity in terms of enhanced learning.

## **5. Abbreviations used**

SIUD	State Institute for Urban Development
KMRP	Karnataka Municipal Reforms Project
CURIPe	Centre for Urban and Rural Infrastructure Planning enterprises
KUIDFC	Karnataka Urban Infrastructure Development and Finance Corporation
PPT	Power Point Presentation
ATI	Administrative Training Institute
SWM	Solid Waste Management
UGD	Under Ground Drainage
CMC	City Municipal Council
ULB	Urban Local Body

# Photographs.



With Ms. Kavita, JE, CMC, Hassan



With Shri. Nagabushana, Commissioner, CMC, Hassan



With Shri. Balachandra, Commissioner, Chamrajnagar, CMC, now Commissioner, KGF, CMC



With Shri. Bheemneedi, Commissioner, CMC, KGF now Commissioner, KGF UDA