Australian Agency for International Development

VIET NAM:

THREE DELTA TOWNS
WATER SUPPLY AND SANITATION PROJECT

Independent Completion Report

December 1st 2008

Prepared by:

Edwin Shanks
Team Leader, Institutional Development Specialist

Alastair Kerr
Water Supply and Sanitary Specialist

Table of Contents

x

Acknowledgements and Certification

The ICR Team would like to thank all the people involved in the project from Bac Lieu, Dong Thap (Sa Dec) and Kien Giang (Ha Tien) who took part in our meetings and discussions in the project area. In particular, we would like to thank Mr Nguyen Van Thuan (AusAID Activity Manager), Mr Geoff Bridger (AMC Team Leader), Mr Nguyen Van Hue and the Directors of the Water Supply and Environment Companies in each province for the excellent arrangements that were made for the itinerary and fulfilling the information requirements of the mission. The ICR team is appreciative of the great efforts that were made by all partners to help ensure the independence of the review.

This report reflects the viewpoints of the members of the Independent Completion Report team only. It does not necessarily reflect the viewpoints of the either the Government of Australia nor of the Provincial Government Authorities or any of the other agencies consulted during the ICR mission.

x.

List of Abbreviations

ADB	Asian Development Bank
AMC	Australian Managing Contractor
AUD / A$	Australian Dollar
BL	Bac Lieu Town
CAC	Community Advisory Committee
CD	Community Development component
CLO	Community Liaison Officer
EHMA	Environmental health Micro Activity program
EIRR	Economic Internal Rate of Return
GOA	Government of Australia
GOV	Government of Viet Nam
HT	Ha Tien Town
ICR	Independent Completion Report
ID	Institutionbal Development component
IEC	Information, Education and Communication
IICP	Infrastructure Investment Coordination Program
M&E	Monitoring and Evaluation
MOC	Minmistry of Construction
MPI	Ministry of Planning and Investment
O&M	Operations and Maintenance
PCC	Project Coordination Committee
PCR	Project Completion Report (by AMC)
PDD	Project Design Document
PID	Project Implementation Document
PMU	Project Management Unit
PPC	Province People's Committee
RAP	Resettlement Action Plan
SA	Subsidiary Arrangement
SCS	Sanitation Credit Scheme
SD	Sa Dec Town
SSP	Schools Sanitation Program
TA	Technical Assistance
TAG	Technical Advisory Group
TWU	Towns Women's Union
UfW	Unaccounted for Water
WSEC	Water Supply and Environment Company
WSS	Water Supply and Sanitation
WTP	Water Treatment Plant
VND	Vietnam Dong

x.

Project Goal and Objectives

Project goal:	To improve the welfare of residents of Bac Lieu, Ha Tien and Sa Dec urban wards and communes by rehabilitating and extending water supply, drainage, wastewater and solid waste management facilities and services and to develop the capacity of local institutions and community groups to manage these systems on a sustainable basis.
Component 1:	**Bac Lieu:** Development of infrastructure improvements in Bac Lieu integrated with capacity building and awareness raising of institutions and the community
Component 2:	**Ha Tien**: Development of infrastructure improvements in Ha Tien integrated with capacity building and awareness raising of institutions and the community
Component 3:	**Sa Dec**: Development of infrastructure improvements in Sa Dec integrated with capacity building and awareness raising of institutions and the community
Component 4:	**Project Management**

x.

List of Key Dates

Date	Event
27-May-93	MOU on Development Cooperation signed between GOV and GOA
01-Jan-99	GOV request GOA assistance for Bac Lieu water supply project, Identification Mission mobilized
01-Jan-00	Feasibility Study team mobilised from GHD
28-Jun-00	GOV request GOA assistance to include water supply and sanitation for Ha Tien and Sa Dec
10-Jan-01	Project Design Document (PDD) issued
04-Oct-01	Contract signed between AusAID and GHD
01-Dec-01	Sub-consultancy Agreement signed with WASE
21-Dec-01	Contract Amendment No. 1 signed
14-Mar-02	Feasibility Study Review reports for 3 towns issued to AusAID
23-May-02	First TAG (Engineering)
03-Jul-02	Subsidiary Arrangement signed in HCMC
05-Nov-02	Second TAG (Resettlement)
19-Nov-02	Final PID, Risk Management Plan, M&E Plan and Environmental Management Plans issued
24-Feb-03	First Design Reports issued to AusAID
17-Mar-03	Third TAG (Institutional Development & Engineering)
12-Aug-03	Fourth TAG (Resettlement)
06-Nov-03	Fifth TAG (Institutional, Community Development & Engineering)
13-Jan-04	Commissioning/Opening of Ha Tien new raw water pump station & transmission main to town
17-Sep-04	Sixth TAG (Resettlement)
01-Oct-04	First Comprehensive Resettlement Action Plan (C-RAP) completed and approved
28-Nov-04	Seventh TAG (Institutional, Community Development & Engineering)
23-May-05	Eighth TAG (Engineering)
22-Jun-05	Ninth TAG (Resettlement)
03-May-06	Tenth TAG (Institutional, Community Development & Engineering)
31-Aug-06	Amended Subsidiary Arrangement signed by AusAID and 3 PCCs during August
30-Sep-06	EHMA Program completed in 3 towns
08-Nov-06	Eleventh TAG (Engineering)
30-Jan-07	Bac Lieu new treated water pump station at WTP1 commissioned and operating
05-Aug-07	Twelfth TAG (Engineering)
21-Sep-07	In Situ Public Toilets completed in 3 towns
30-Sep-07	Ha Tien new water treatment plant commissioned and operating
30-May-08	Final PCC meeting Sa Dec preceded by workshop on project achievements and handover strategy
30-May-08	Bac Lieu new water treatment plant commissioned and operating
30-May-08	Bac Lieu new sanitary landfill commissioned and operating
6-Jun-08	Draft Activity Completion Report issued
31-July-08	New Sa Dec new water treatment plant commissioned

x.

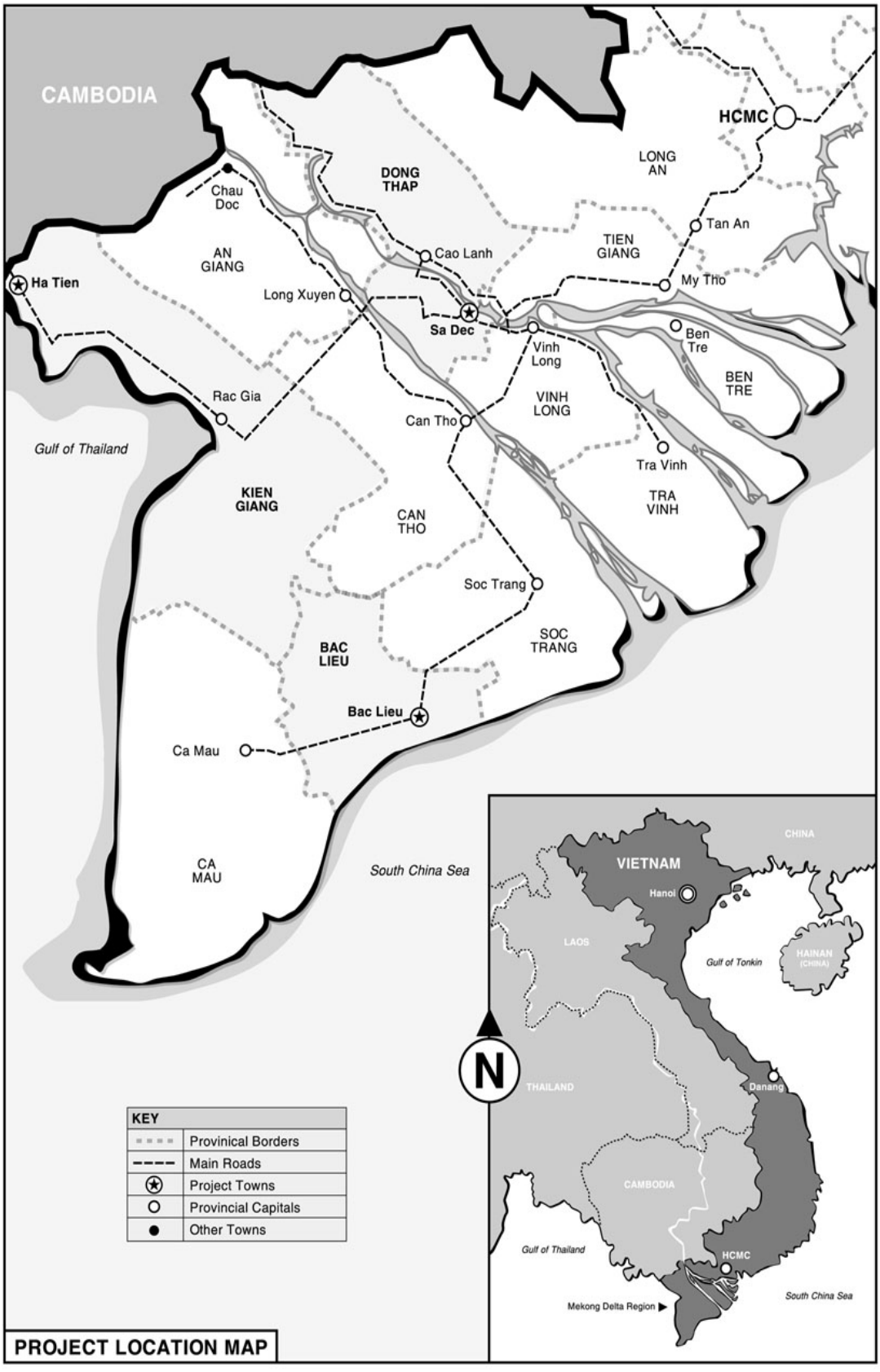
Final Cost Summary

All costs in Thousand Australian Dollars

CATEGORY	TOTAL 2001/2002	TOTAL 2002/2003	TOTAL 2003/2004	TOTAL 2004/2005	TOTAL 2005/2006	TOTAL 2006/2007	TOTAL 2007/2008	TOTAL 2008/2009	TOTAL COST A$ '000
AUSTRALIA									
Personnel	2,954	4,210	2,535	2,452	2,509	1,751	1,715	338	18,464.000
Procurement	1,541	4,657	5,326	8,448	3,515	1,333	1,358	0	26,178.000
Training	10	81	220	108	29	64	15	0	527.000
In Country Travel	57	134	112	99	120	100	107	21	750.000
Reimbursable Costs	31	68	24	21	17	9	4	0	174.000
Management (Site office & procurement fee)	700	700	700	780	640	300	214	105	4,139.000
Total	**5,293**	**9,850**	**8,917**	**11,908**	**6,830**	**3,557**	**3,413**	**464**	**50,232.000**
VIETNAM									
Bac Lieu	0	14	72	1,288	3,752	3,669	5,730	3,490	18,015.000
Ha Tien	0	74	326	270	1,129	1,671	500	0	3,970.000
Sa Dec	0	0	2	204	291	1,812	2,417	750	5,476.000
Training	0	4	4	6	6	4	0	0	24.000
Project Management	15	60	140	150	155	155	150	30	855.000
Total	**15**	**152**	**544**	**1,918**	**5,333**	**7,311**	**8,797**	**4,270**	**28,340.000**
PROJECT TOTAL	**5,308**	**10,002**	**9,461**	**13,826**	**12,163**	**10,868**	**12,210**	**4,734**	**78,572.000**

x.

Project Area Map



x.

EXECUTIVE SUMMMARY

Initiative title:	**Three Delta Towns Water Supply and Sanitation Project (3DT Project)**
AidWorks ID:	INE428
Country/region:	Viet Nam, Mekong Delta Region Provinces: Bac Lieu, Dong Thap & Kien Giang Towns: Bac Lieu, Sa Dec & Ha Tien
Primary sector:	Environment, urban development, water supply and sanitation
Date commenced:	October 2001
Date completed:	October 2008
Cost to GOA	A$ 50.232 million
Total cost:	A$ 78.572 million (approximate due to changes in exchange rates)
Form of aid:	Grant: Procurement Trust Fund (AMC) for equipment, capacity building and Technical Assistance.
Country strategy contributed to:	Strategic Objective 2: Develop Human Capital; Intermediate Objective 2.3.1: Improve health by increasing access to clean water and sanitation; Program Outcome of Policies, institutional arrangements and technologies that meet the health, water and sanitation needs of the poor demonstrated and widely adopted[1].
Delivery organization:	GHD Pty Ltd. in association with WASE (Vietnam)
Counterpart organisation:	Ministry of Construction of Viet Nam (MOC). Province People's Committees of Bac Lieu, Dong Thap and Kien Giang. Bac Lieu Water Supply and Environment Company; Dong Thap Water Supply and Urban Environment Company; Kien Giang Water Supply and Drainage Company; and Ha Tien Public Works Management Unit.
Project Goal:	To improve the welfare of residents of Bac Lieu, Ha Tien and Sa Dec urban wards and communes by rehabilitating and extending water supply, drainage, wastewater and solid waste management facilities and services and to develop the capacity of local institutions and community groups to manage these systems on a sustainable basis.
Economic rate of return or similar:	IERR – 17%
Final initiative quality rating:	**4.5** (4.5 – 5.5 – 4.5 – 4 – 5)
Contact AusAID employee:	Mr Nguyen Van Thuan (Activity Manager, AusAID, Ha Noi) Van-Thuan.Nguyen@dfat.gov.au
ICR authors and organisations:	1) Edwin Shanks (Team Leader / Program management and institutional development specialist / independent consultant). 2) Alastair Kerr (Water supply and sanitary specialist / independent consultant).

1. **Project background.** In 1998 the Government of Viet Nam (GOV) and the Government of Australia (GOA) agreed on program priorities for the period 1999-2001 which included rural development and the water sector, with a focus on the Mekong Delta Region. Preparation of the Three Delta Towns Water Supply and Sanitation Project (3DT Project) took place over a two year period. The project commenced in October 2001 and was originally scheduled to run for 5 years; but in 2002 this was increased to 6 years and 8 months (to June 2008) at the request of AusAID. By January 2007, however, it was clear that

[1] Viet Nam Australia Development Cooperation Strategy 2003-2007

construction on some major works would be delayed well into 2008. Options for an extension to the project period were tabled, and AusAID approved an extension to the project and AMC inputs up to the end of July 2008. The current situation, as of October 2008, is that all contractual matters and personnel inputs of the Australian Managing Contractor (AMC) have been completed, while contruction and commissioning of some outstanding works funded by the GOV will continue to late 2008 or into 2009.

2. **Overall assessment.** The project comprised three main components covering the 3 towns, with a fourth component in project management. The Objective of each town component emphasized that infrastructure improvements (in water supply, drainage, wastewater and solid waste management facilities and services) should be closely integrated with Community Development and Institutional Development sub-components. This integrated approach was central to the project concept and design. The Goal of the 3DT Project indicates three inter-related sets of project outcomes and impacts, as follows:

- First, to *'improve the welfare of residents'* – which may be evident, for example, through changes and improvements in health status and behaviour, economic opportunities, quality of life, and quality of the urban environment etc;

- Second, to *'rehabilitate and extend facilities and services'* – which covers the technical quality and performance of the engineering works and service systems;

- Third, to *'develop capacity of local institutions and community groups'* – which is seen as a pre-requisite for sustainable management of these service systems.

3. Across all three aspects, the project has clearly demonstrated high potential achievement and good progress towards the goal and objectives. This is especially with respect to the improvement in water supply systems and services; strengthening the customer-service orientation and day-to-day management capacity of Water Supply and Environment Companies (WSECs); demonstrated benefits and impacts under the Community Development component; widespread improvements in household sanitary conditions and practices amongst both lower and higher income groups; improvements in the urban environment and quality of life associated with the solid waste collection systems; and strengthening the role of women in planning and implementation. These are clear positive outcomes.

4. **Technical Quality.** Technical quality of the project has been high. The project benefited from a careful preparation process and explicitly drew on experience from earlier AusAID funded projects in this urban sector. This contributed to enhancing the appropriateness of the overall project concept and implementation strategy, and relevance of the planned investments and activities. The quality of the engineering designs and technical supervision inputs provided through the AMC were of a high standard. The project reflected international best-practice by promoting improved household and community sanitation practice and awareness through a range of mechanisms supported by effective IEC work.

5. **Implementation progress and project completion.** In overall terms, progress over the life of the project has been satisfactory, particularly with respect to the water treatment and supply systems, and Community Development and Institutional Development activities. Construction on some of the major works with GOV funding is, however, still incomplete. Particularly hard hit are the drainage works and sanitary landfill sites. This was the major factor impeding effectiveness. These delays were encountered at various stages, including: an extended design period while technical appraisal procedures were followed; delays in

resettlement and compensation procedures (although, positively, both the GOV and GOA social safeguards were fully complied with); and subsequent delays in construction. Project completion has also, rather unfortunately, coincided with a period of rapid escalation of construction costs which has exacerbated these delays over the last year.

6. **Management arrangements.** At the beginning of the project, the responsibilities for investment project management were being progressively devolved by the GOV to the provincial government administrations. This required new capacities at provincial level. The project coordination and management arrangements were conducive to this new situation. The Project Coordination Committee provided an adequate forum for reaching consensus on essential project-wide strategies and enabled cross-province learning, while affording a sufficient level of decision-making responsibility to the provinces. The project adopted a funding modality whereby a majority of the costs for basic construction work were funded by the GOV, while GOA funds for Technical Assistance and equipment supplies were channeled through a Procurement Trust Fund managed by the AMC. This represented a level of GOV co-financing that goes beyond the normal type and level of counterpart funds in most grant-financed ODA projects. Province ownership was enhanced through management of the GOV financing through the provincial budget.

7. **Quality control and accountability mechanisms.** Under this financing and management arrangement, there were no formal 'co-signatory' provisions between the AMC and the PMUs for design and construction contracts. Rather, the Subsidiary Arrangement included a number of clauses to the effect that the AMC would be responsible for 'certifying' progress and quality of work, as a basis for payment decisions, although without formal contractual enforcement powers. In practice, these provisions were not put into effect and the intended GOV Civil Works Trust Fund was never fully instituted. It was not possible, therefore, for the AMC to fulfill this certification role. This is, in principle, a potentially serious short-coming because it means that essential provisions in the Subsidiary Arrangement for establishing a mechanism of joint accountability and ensuring quality control were not followed. Moreover, the articulation of respective roles and responsibilities in the SA essentially means that the GOA (and inter-alia the AMC as its representative) has no accountability for the delays which have occurred on the GOV funded works. While these issues were discussed in early PCC meetings, it appears they were not identified by the TAG nor followed-up formally by AusAID during the project.

8. The ICR Team has had to assess to what extent this may have influenced effectiveness and outcomes of the project. On the one hand, it is likely that the main reasons for the construction delays would not have been ameliorated by a more formal co-signatory arrangement. On the other hand, the split in responsibilities for design and construction between the AMC and the PMUs appears to have contributed to reduced effectiveness of coordination between the GOA and GOV funded parts of the project. In particular, the various delays to the GOV-funded construction work had the effect of decoupling it from equipment supplies and limiting the effectiveness of training inputs.

9. Despite these constraints, it is evident that the AMC established and maintained effective and collegiate working relationships with their counterparts in the PMUs and with the provincial authorities. There is no doubt that the involvement of AMC Construction Advisors was instrumental in improving the quality of construction workmanship. However, the effectiveness of the AMC's supervision inputs could have been improved had these provisions in the SA been fulfilled, or had an AMC representative been given a formal status specifying these supervision responsibilities in the construction contracts.

10. **Water supply.** The project has been effective in providing rehabilitated, improved and extended water supply to residents of the three towns. The project adopted GOV targets for water supply coverage of 90% for urban areas by 2010, and is well on the way to achieving these targets – extending overall coverage in the three towns from 32% in 2001 to 75% by the end of 2008. Safe drinking water is being provided 24 hours per day at adequate pressure. A Completion Survey conducted by the project indicates that, across all three towns, there has been a marked increase in the proportion of households using piped water for drinking and cooking purposes, with a concomitant decrease in the use of canal and river water. These changes in are evident for both higher and lower income groups. The survey also indicates a high rate of satisfaction amongst customers with the improved services.

11. **Drainage.** The project has made investments in drainage systems in two of the towns (Bac Lieu and Sa Dec) to improve the urban environment and welfare of the residents. These drainage works have been delayed in both locations, but are likely to be completed by the end of 2008. When completed, the pumping stations and canals and secondary drainage works will effectively prevent flooding during periods of high tide and storm rainfall. The drainage works will serve urban wards occupied predominately by lower-income households; while rehabilitation plans for two particularly disadvantaged urban wards in Bac Lieu were completed and incorporated into tertiary drainage planning and design.

12. **Solid waste management.** All three towns have benefited from investments in solid waste collection systems and new sanitary landfill facilities, which were designed to meet 2010 requirements. Significant improvements have been achieved in solid waste collection – coverage has been extended to 100% of the core areas in each town, and there has been an increase in the proportion of household using the solid waste collection system from 34% to 57%. Construction of the sanitary landfill sites has not yet been fully completed, while this sub-component has the potential to be highly effective when the facilities are operational.

13. **Wastewater.** The initial project design included a sub-component on wastewater collection and disposal. However, during preparation it was agreed this sub-component should be excluded. The rationale given for this was that GOV funds available for construction were insufficient to cover all the initially proposed works. In retrospect, the ICR Team believes this was a sensible decision at the time. The project has subsequently had a considerable task completing the other major construction components according to cost and schedule, such that maintaining the wastewater systems would have exacerbated these difficulties. However, omission of the wastewater sub-component had the effect of reducing relevance of the overall project concept and design for integrated infrastructure provision. This is now seen by all stakeholders as a priority for future urban development projects.

14. **Community Development.** The project design emphasized the integration of awareness raising and community mobilisation in support of the infrastructure components and urban upgrading, and improved household and community sanitation awareness and practice. This was promoted through a suite of activities, and funding instruments, aimed at ‘public goods’ and facilities (through Environmental Health Micro-Activities and Schools Sanitation Program); ‘private goods’ and facilities (through a Sanitation Credit Scheme and Biogas Credit Scheme); supported by strong Information Education and Communication and community liaison processes. The high level of effectiveness of these activities was emphasised by all stakeholders during the ICR mission. This was evidently one of the most successful and widely appreciated components of the project. The project has effectively demonstrated the value and mechanisms through which a comprehensive approach to

community and household sanitation and environmental improvement can be implemented with good results. This is a good model for similar urban projects in future.

15. **Institutional Development.** The Institutional Development (ID) component was targeted primarily on capacity building of the WSECs responsible for the provision of water supply and sanitation services. This included both 'technical' and 'non-technical' sub-components and represented an ambitious program of activities. The training strategy adopted by the project was appropriate and generally effective. According to many sources of opinion, one of the most effective and widely appreciated aspects has been improving the customer service orientation and quality of services provided by the WSECs. This is a notable achievement of the project. The project has also been effective in strengthening management systems within the WSCEs through the provision of office equipment and office automation systems. WSEC managers gave generally positive feedback on the quality of these inputs and systems. However, one main shortcoming is that, in some cases, the office automation systems are not being fully utilized or maintained. At the same time, effectiveness of this component could have been improved if more resources were devoted to it and weighted more towards the post-completion stage of project infrastructure.

16. **Sustainability.** The non-completion of some of the major facilities presents an uncertain situation with respect to both operational and financial sustainability. This is particularly with respect to system-wide management of the landfill facilities and water treatment plant operations. Staff training was provided, but due to delays in construction and the consequent decoupling of the GOA and GOV funded elements of the project, training courses were held well before completion of the facilities. Unless adequate recurrent funding for operations and maintenance can be ensured (through a socially acceptable increased rate of tariffs and/or continued subsidy from the province/town budgets), operators will face the prospect of cutting operating costs and/or deferring maintenance. All WSECs expressed doubts that they would be able to run the new facilities without financial losses in the short-term. Under the CD Component, the prospects for sustainability of the Sanitation Credit Scheme are good. There appears to be strong commitment on the part of the local authorities to maintain the SCS for as long as it is required over the next few years. Continuation of the other CD activities, such as the EHMA and IEC work, will depend on local funding availability and interest.

1. INTRODUCTION AND METHODOLOGY

1.1 Project Background and Summary

In 1998 the Government of Viet Nam (GOV) and the Government of Australia (GOA) agreed on program priorities for the period 1999-2001 which included rural development and the water sector, with a focus on development assistance to the Mekong Delta Region. Following a request from the GOV for support to urban water supply and sanitation improvement in Bac Lieu Town, an AusAID project identification mission was undertaken in early 1999. This mission concluded that Bac Lieu was a centre where 'assistance could be beneficially provided to support the upgrading and enhancement of water, sanitation and drainage and solid waste management facilities'. A feasibility design study for the Bac Lieu proposal was then undertaken in early 2000. Following this, in June 2000, the Ministry of Planning and Investment (MPI) requested AusAID for additional assistance for Ha Tien Town (in Kien Giang Province) and Sa Dec Town (in Dong Thap Province). It was agreed by AusAID that the proposed additional assistance would complement the Bac Lieu project and provide economies of scale by combining implementation for the three towns into one project[2].

The Project Design Document (PDD) for the Three Delta Towns Project (3DT Project) was finalized in January 2001. The project comprised 3 main components covering the 3 towns, with a fourth component in project management. The Objective of each town component emphasized that infrastructure improvements should be integrated with capacity building and awareness raising of institutions and the community. This integrated approach is central to the project concept, whereby close linkages were expected between the technical sub-components (in water supply, drainage, waste water and solid waste management systems) and the Community Development (CD) and Institutional Development (ID) sub-components. Urban planning and infrastructure coordination were also included, together with management of resettlement and compensation for households affected by construction. The project adopted a funding modality whereby a majority of the costs for basic construction work were funded by the GOV, while GOA funds for Technical Assistance and equipment supplies were channelled through a Procurement Trust Fund managed by the Australian Managing Contractor (AMC). This represented a level of GOV financing that goes beyond the normal type and level of counterpart funds under most grant-financed ODA projects (in water supply or other sectors), normally in the range of 5-10%.

The 3DT Project commenced and the AMC mobilised in October 2001. Signing of the Subsidiary Arrangement (SA) between AusAID and the three Province People's Committees was, however, delayed until July 2002. The project was originally scheduled to run for 5 years (to October 2006), but in 2002 this was increased to 6 years and 8 months (to June 2008) at the request of AusAID. The main AMC inputs were due to end in November 2007, with the final period up to June 2008 scheduled for operation and maintenance training. However, by January 2007 it was clear that construction on some major works would be delayed well into 2008, and the AMC submitted a proposal on strategies for project completion which included the rationale and options for an extension to the project period. Following recommendations from the 12th Technical Advisory Group (TAG) visit in August 2007, AusAID approved an extension to the project and AMC inputs up to the end of July 2008. The current situation, as

[2] AusAID had under-budgeted its Viet Nam project pipeline so had resources that could be allocated to a larger project. For similar reasons, the Cuu Long Delta Rural Water Supply and Sanitation Project (CLDRWSSP) was expanded to include several district towns.

of August 2008, is that all AMC contractual matters and personnel inputs will be completed by end of October 2008, while contruction and commissioning of some outstanding works funded by the GOV will continue into late 2008 and 2009.

The project has been jointly coordinated by AusAID and the Province Peoples Committees (PPCs) through a Project Coordination Committee (PCC), with representation from national government through the Ministry of Construction (MOC)[3]. Province level management and coordination was through Provincial Steering Committees and Project Management Units (PMUs) for each town. There were 5 main counterpart implementation agencies, including: the Bac Lieu Water Supply and Environment Company and the Bac Lieu Urban Works Department; the Dong Thap Water Supply and Urban Environment Company; the Kien Giang Water Supply and Drainage Company and the Ha Tien Public Works Management Section. The AMC (GHD Pty Ltd) associated with a national company (WASE) for the provision of technical design and support services. Other province departments and mass associations actively involved in project implementation included the Department of Construction, the Women's Union and the Department of Education and Training.

1.2 Objectives of the ICR

The objectives of the Independent Completion Report (ICR), as set out in the Terms of Reference, were two-fold (see Annex 6). First, to report on the relevance, effectiveness, efficiency, impact and sustainability of the project, with particular reference to lessons learnt from this initiative. Second, to make recommendations on viable options for enhancing the sustainability of the project outcomes. A further objective was indicated during initial briefing at the AusAID office in Hanoi, which was to make recommendations on potential future aid financing modalities for support to the urban water and environment sector, including poverty reduction activities, in light of experience from the 3DT Project and the moves towards harmonization and alignment of Official Development Assistance in Vietnam.

1.3 ICR Methodology

The ICR methodology and key questions addressed are given in the Focus Paper in Annex 7. This was distributed to the project partners in advance of the ICR mission.

The Goal of the 3DT Project indicates three inter-related sets of project outcomes and impacts, as follows:

- First, to *'improve the welfare of residents'* – which may be evident, for example, through changes and improvements in health status and behaviour, economic opportunities, quality of life, and quality of the urban environment etc;
- Second, to *'rehabilitate and extend facilities and services'* – which covers the technical quality and performance of the engineering works and service systems;
- Third, to *'develop capacity of local institutions and community groups'* – which is seen as a pre-requisite for sustainable management of these service systems.

The Component Objectives elaborate on these elements of the Project Goal. In addition to the design, construction and commissioning of the major water supply, drainage and solid waste management facilities, the Component Objectives emphasize:

[3] The Management Board of Water Supply & Sanitation Development Projects of MOC.

- Institutional support to the Water Supply and Environment Companies (WSECs) to become financially viable and sustainable while being responsive to community needs and meeting customer and community requirements for services;
- Strengthening the role of women in water supply and sanitation planning and implementation;
- Improved inter-agency coordination;
- Increased awareness of water, environmental sanitation and health linkages amongst the community; and
- Improved urban neighbourhoods and school environments.

The main focus of the ICR has been to assess to what extent the project has achieved each of these elements of the Project Goal and Component Objectives. In addition, the ICR has assessed to what extent the project has contributed to the higher-order strategies and longer-term objectives of both the GOV and GOA for this sector.

The main sources of information for the ICR have included: (i) ICR meetings and discussions with project stakeholders including the province and town authorities and departments, AusAID, the AMC, the WSECs and scheme managers etc; (ii) key project documents including the PDD and Project Implementation Document (PID), Annual Plans of the AMC, TAG reports, the draft Project Completion Report (PCR) and attached Working Papers; (iii) M&E data, technical studies and reports on economic analysis and community surveys; (iv) a review of the assumptions and methodology used in the ACR to critically assess the validity of the conclusions regarding project outcomes and impacts; and (v) secondary information sources, including GOV legislation and sector studies.

The draft Project Completion Report and Working Papers were provided to the ICR Team in advance of the mission. The ICR Team would like to comment on the high quality of the final documentation prepared by the AMC, including comprehensive M&E data from completion surveys. This has enabled the ICR Team to focus on higher-order questions related to project outputs and outcomes, without necessitating much additional data collection.

Annex 1 & 2 provide a summary of project outputs, outcomes and achievements in relation to the original Logical Framework Matrix and Key Result Areas, as presented in the draft PCR, to which reference is made throughout the ICR text.

2 PROJECT ANALYSIS

2.1 Relevance

2.1.1 Project Design, Scope and Purpose

The 3DT Project benefited from a careful preparation process. This evidently contributed to enhancing the appropriateness of the overall project concept and implementation strategy, and relevance of the planned investments and activities. Pre-existing feasibility studies were subject to a review and adjustment where necessary during project preparation. After the project commenced, the original PDD (from January 2001) was also further elaborated to prepare a Project Implementation Document (issued in November 2002). While this was a time-consuming process, these steps had the advantage of enabling the partner agencies (in particular the AMC and PMUs) to jointly focus on clarifying the project design parameters and to build up working relationships and understanding at an early stage.

The project also benefited and explicitly drew on experience from earlier AusAID funded projects in this sector, including the Five Provincial Towns Water Supply Project (1994-1999) which had worked in Vinh Long and Tra Vinh in the Mekong Delta, and the Da Nang Water Supply Project. Elements of these projects that were incorporated into the 3DT Project included: (i) the integrated nature of the infrastructure, institutional and community development components; (ii) the role of community development in improving project effectiveness and sustainability; and (iii) the funding arrangements whereby a major proportion of basic construction costs were covered by GOV resources. Subsequent experience from this project further validates the appropriateness of these strategies.

The 3DT Project was designed in accordance with the Urban Development Plans for each town and the GOV National Orientation Plans for Water Supply and Drainage. While the project focused on the key demand for improved water supply and aimed to satisfy that demand to the Year 2010, it was also intended that the integrated approach to improvements in water supply, drainage, wastewater and solid waste management should be the first steps towards achieving the GOV's National Orientation Plans in the longer-term. The extent to which the project has provided this platform and influenced national strategy is assessed in later sections of this report, particularly in terms of institutional capacity building.

The project design was closely aligned with AusAID's Country Program Strategy for 1999-2001 and later periods. With respect to the Strategy for 2003-2007, it clearly addressed 'Strategic Objective 2: Develop Human Capital', and in particular 'Intermediate Objective 2.3.1: Improve health by increasing access to clean water and sanitation' with a 'Program Outcome of Policies, institutional arrangements and technologies that meet the health, water and sanitation needs of the poor demonstrated and widely adopted'[4]. The project has built on Australian expertise and comparative advantage in small-scale infrastructure, water supply and sanitation, water resources management and credit. It was also in line with the strategy of other ODA funders such as the World Bank and ADB in focussing efforts on upgrading water supplies in smaller provincial cities and district towns.

[4] Viet Nam Australia Development Cooperation Strategy 2003-2007

2.1.2 Water Supply

The water supply investments and systems supported by the project have been highly relevant to the needs of the urban communities. Prior to the project, the people of all three towns suffered from intermittent, low pressure water supplies. In the case of Ha Tien, there was an acute shortage of water in the dry season.

The project provided augmented water sources in the form of additional boreholes, raw water intakes, raw water transmission mains, water treatment plants and service reservoirs. In all three towns, full treatment and disinfection, new treated water distribution mains and local reticulation systems have been provided, replacing existing systems which were old, leaky and becoming unserviceable. The project also initiated 'Fast Track' works to upgrade the existing water supply system in Ha Tien in the early years, which was clearly an appropriate and widely appreciated strategy to adopt for the local residents.

2.1.3 Drainage

One of the objectives of the project was to improve the welfare of the residents of the three towns and in particular those of the poorer central and peri-urban wards by upgrading the urban environment. Bac Lieu and Sa Dec opted to make improvements to their drainage systems. Extensive areas of these towns lie below high-tide or regular flood level. Existing drainage canals were not fulfilling their original function, failed to evacuate stormwater so that large areas of the towns were subject to flooding during the wet season.

These systems are highly relevant to the objectives of the project since they serve low-lying areas of the towns occupied mainly by the poorer residents. Under the project, new and existing drainage canals in Bac Lieu and Sa Dec have been excavated / cleaned and stone-lined to improve their carrying capacity; new tidal sluice gates and pumping stations will operate at times of high tide and heavy rainfall to evacuate water from the canals and prevent flooding. The local environment of the canal banks will be improved; and people will no longer suffer the visual and smell nuisances caused by polluted and stagnant water.

2.1.4 Wastewater

Pollution of drainage canals and rivers by liquid domestic waste and industrial effluent represents a degradation of the urban environment and it is widely recognized this is becoming an increasing environmental problem throughout the Mekong Delta Region.

In the original project design (namely, in the GOV Feasibility Studies and the PDD) a component of work on wastewater collection and disposal was included. This included proposals for Combined Sewage Overflows, Gravity Interceptor Sewers, wastewater pumping stations and wastewater treatment plants. However, during the project preparation period these proposals were progressively scaled-back such that the major wastewater works were eventually excluded. The wastewater sub-component was finally limited to providing school toilet blocks in 30 schools under the Schools Sanitation Program, revolving funds for septic tank loans under the Sanitation Credit Scheme, and public toilet blocks in urban areas.

The rationale given for omitting this sub-component was that GOV funds available for construction were insufficient to cover all the initially proposed works. Provincial authorities were faced with the necessity of prioritising their needs, and in all cases, opted to postpone

provision of wastewater collection and treatment. In retrospect, the ICR Team believes this was a sensible decision at the time. The project has subsequently had a considerable task completing the other major construction components according to cost and schedule, such that maintaining the wastewater systems would have exacerbated these difficulties.

However, the omission of the full wastewater sub-component had the effect of reducing relevance of the overall project concept and design for integrated infrastructure provision, since untreated wastewater and some septic tank effluent will continue to discharge into the canals and rivers, detracting from the beneficial effect of the improved drainage. In the ICR Team discussions with the provincial authorities and WSECs it became clear that this is now seen as a high priority, and any future initiatives should definitely include wastewater collection and treatment facilities. This issue is currently receiving much coverage in Vietnam's national press, reflecting growing public awareness and concern.

2.1.5 Solid Waste

At the start of the project, all three towns had limited facilities for solid waste collection (e.g. Bac Lieu's covered only the town's core area with 60% efficiency)[5]. Domestic waste was deposited and collected from the streets in the traditional manner, or frequently deposited in canals. Tipping at the waste dumps was uncontrolled. Leachate seeped into the groundwater and polluted local crops; the tips themselves attracted rats and carrion birds.

The project aimed to improve this situation and the urban environment by (i) increasing the efficiency of solid waste collection systems in the urban area and (ii) at the disposal site by providing modern sanitary landfill facilities. In general, these systems are (or will be when the landfill sites are completed) highly relevant to the project Goal of improving the welfare of the residents of the three towns. This is by provision of modern sanitary disposal methods, but especially by improvements achieved in solid waste collection. In the case of solid waste disposal, however, effectiveness of the institutional development effort in building capacity of local authorities to manage the systems on a sustainable basis appears to have been less clear.

2.1.6 Community Development

The project design emphasized the integration of awareness raising and community mobilisation in support of the main construction components and urban upgrading efforts, and improved household and community sanitation awareness and practice. The CD Component promoted these objectives through a number of channels, including:

- Community liaison and awareness raising through a system of Community Advisory Committees (CACs) linking Township and Ward level administrations, the mass associations, community representatives and Community Liaison Officers (CLOs);
- A program of Environmental Health Micro-Activities (EHMA) which provided small grants for small-scale urban upgrading initiatives planned, managed and implemented through the CACs as well as for upgrading school facilities and environment;
- Revolving funds for household septic tank toilets through a Sanitation Credit Scheme (SCS) and a Biogas Credit Scheme (BCS) for processing livestock waste that were managed jointly by the Township Women's Union (TWU) and the PMUs;

[5] PDD, February 2001.

- A Schools Sanitation Program (SSP) funded jointly by the 3DT Project and the town Education and Training Section;
- An IEC program linked to the activities of the CACs, SCS and SSP etc.

This suite of activities, and funding instruments, was a relevant and appropriate strategy for the project to adopt, even though the scale of some activities was limited. This follows international best-practice, which indicates that improved sanitation practice and awareness need to be promoted on several fronts simultaneously to be effective. This includes 'public goods' and facilities (though the EHMA) and 'private goods' and facilities (through the SCS and BCS), supported by strong IEC and community liaison processes.

2.1.7 Institutional Development

The Institutional Development (ID) component was targeted primarily on capacity building of the WSECs responsible for the provision of water supply and sanitation services in the 3 towns. Surveys undertaken at the beginning of the project indicated that most companies considered themselves relatively weak in customer service, technical and managerial aspects. The WSECs had limited contact with their customers and were basically 'supply' rather than 'demand' driven. The financial viability of the WSECs was uncertain, while they were entering a period of re-orientation and re-structuring to become self-sustaining 'public utility companies' with more-or-less autonomy from state subsidies.

The ID Component was designed to include both 'technical' and 'non-technical' sub-components The technical or engineering sub-component was linked to installation, operations and maintenance of the water supply, drainage and waste disposal facilities, and scheduled to coincide with commissioning and early operations of these facilities (hence, extending to the end of the project). The non-technical sub-component was initiated earlier in the project period (and completed in 2007). The latter included a wide range of activities and training courses, with a focus on the following aspects:

- Promoting inter-agency coordination and integrated approaches to urban planning through an Urban Development / Infrastructure Investment Coordination Program;
- Provision of 'foundation' training for staff of the WSECs in a range of planning, management, administration, IEC and language skills;
- Provision of office equipment and office automation systems and software such as accounting, billing and GIS-based customer management systems;
- Developing a customer focus within the WSECs to understand community and customer needs and introduce more responsive and demand driven services;
- Promoting business planning and financial planning models and systems, including tariff proposals, asset management, and management of investment plans;
- Cross-cutting efforts to strengthen the role of women in WSS planning and implementation and to promote gender awareness;
- Building capacity for effective implementation of the Resettlement Actions Plans (RAPs) and resettlement and compensation procedures.

This was an ambitious and comprehensive approach adopted by the project. In overall terms, it was undoubtedly relevant to the situation and needs of the WSECs at the beginning of the project. There were no other major sources of funding available for capacity building at the time, which warranted considerable investment in this component (particularly of TA inputs).

While the intention of the project to build capacity at both the 'operational level' and at the 'strategic level' of promoting inter-agency coordination and integrated approaches to urban planning was relevant in principle, the latter suffered somewhat from being too ambitious in design and from limited absorption capacity.

2.1.8 Project Management and Coordination Arrangements

Relevance of the project management and coordination arrangements needs to be considered in light of institutional changes taking place at the beginning of the project period. At this time, the responsibilities for budgetary management and investment project management were being progressively delegated and devolved to the provincial government administrations. This was a new situation for the provinces, which required new sets of capabilities and capacities, especially in investment and procurement management. For instance, the 3DT Project in Bac Lieu was the first 'Category A' investment project to be managed directly by the province. It was to be anticipated that some time would be required for the provincial authorities to become acquainted with the higher level of responsibilities and procedures and that this would influence project implementation progress to some extent.

In this respect, the project coordination and management arrangements were basically appropriate and conducive to this new situation. While a higher level of direct management responsibility was envisaged for the Ministry of Construction during early project preparation, this was shifted to province level in the finally agreed arrangements. It appears the Project Coordination Committee provided an adequate forum for reaching consensus on essential project-wide strategies and enabled cross-province learning, while affording a sufficient level of decision-making responsibility to the provinces (through the Province Steering Committees and Project Management Units). The funding modality enhanced province ownership through management of the GOV contributions through the provincial budget.

2.2 Effectiveness

2.2.1 Overall Progress and Project Completion

A summary of the status of project completion as of end of July 2008 is given in Table 1. In overall terms, progress over the life of the project and towards completion has been satisfactory. This satisfactory performance is confirmed by the TAG reports. Work on the Water Treatment Plants and reticulation systems has generally progressed smoothly and according to schedule. The Community Development activities have been successfully completed and handed-over to the counterpart agencies. The Institutional Development activities are also more-or-less complete, with the exception of some O&M training.

Construction on some of the major works components with GOV funding is, however, still incomplete. The main negative influence on effectiveness of the project has been the delays in the processing, procurement and completion of the GOV-funded construction packages. The various reasons for these delays were reported as follows:

- Periods of up to 14 months were initially lost during the design period while government technical appraisal procedures were followed; staff at the respective DOCs were unfamiliar with the technical requirements of water supply or drainage works and much time was lost in resolving design parameters and cost norms.

- This was exacerbated by difficulties in coordinating proposed alignments for the larger infrastructure works, such as canals, with the spatial development plans of the towns; special approvals had to be obtained to amend development plans to avoid excessive land acquisition and demolition of property.
- Long delays occurred in following resettlement procedures and agreeing compensation rates (although, positively, both the GOV and GOA social safeguards procedures were fully complied with); as of July 2008, completion of some drainage works in Bac Lieu was still held-up while compensation claims were settled.
- Delays have also occurred during construction; some contractors failed to follow construction schedules, mobilised insufficient technical staff or hired unskilled sub-contractors; in recent months, contractors have suffered severe cash-flow problems due to the rise in costs.

Table 1: Status of Construction at 31 July 2008

Com-ponent	Sub-Component	Status	Est. Completion
Bac Lieu	Water Supply	WTP in service; transmission system 95% complete; reticulation system 90% complete; ≈ 12,000 water service connections	October 2008
	Drainage	Drains 60%; pumping stations 40%	End 2009
	Solid Waste	SW Collection equipment delivered and in service; landfill site 90% complete but in service	October 2008
	Community Development	Complete; campaigns and revolving fund continuing with Province support	Completed
Sa Dec	Water Supply	WTP 95% complete; transmission system 100% complete; reticulation system 95% complete; 14,964 water service connections	September 2008
	Drainage	Drains 80%; pumping stations 20%	June 2009
	Solid Waste	SW Collection equipment delivered and in service; landfill site 60% complete	End 2008
	Community Development	Complete; campaigns and revolving fund continuing with Province support	Completed
Ha Tien	Water Supply	WTP, distribution and reticulation systems complete and in service; 4,693 water service connections	Completed
	Drainage	None	-
	Solid Waste	SW Collection equipment delivered and in service; landfill site 35% complete	Not known
	Community Development	Complete; campaigns and revolving fund continuing with Province support	Completed

Project completion has, rather unfortunately, coincided with a period of rapid escalation of construction costs (including materials, labour and fuel) which has exacerbated delays over the last year. Costs of some works have reportedly increased by as much as 30% over the contracted value; while in one case the contractor chose to abandon site and face penalties

rather than face losses from completing the works. Particularly hard hit are the drainage works in Bac Lieu and Sa Dec and the landfill site in Ha Tien. Work on some sites will continue until the end of 2008, and in some instances may continue until mid-2009 or later, even though the AMC's involvement with the project comes to an end in October 2008[6].

2.2.2 Management and Implementation Arrangements

As indicated above, the 3DT Project adopted a somewhat unique funding modality (adopted from an earlier AusAID project in the urban WSS sector), whereby substantial GOV contributions were made through the provincial budget for the civil works construction. The project management and implementation arrangements reflected this funding strategy:-

The GOA provided grant funding for procurement of equipment and some construction materials, support for the CD and ID activities and TA personnel. These inputs were managed by the AMC through a Procurement Trust Fund; items such as water treatment plant equipment and pumps were procured in Australia under Australian procurement regulations while other materials such as pipes were procured in Vietnam. Along with their local sub-consultant, the AMC was tasked with the design of the schemes up to the acceptance of the Project Implementation Document, which contained designs corresponding roughly to the 'Basic Design' requirements of the GOV procedures[7].

During implementation, the AMC continued with an oversight role on progress and quality of construction work, as well as providing support for the CD and training activities. Long-term Construction Advisors and Vietnamese supervision consultants were provided to each town to support the PMUs in their supervision of engineering construction. The AMC also supervised directly the supply, installation and commissioning of Australian-procured equipment and provided support and training to operational staff on the new facilities.

The GOV provided funding for administration of the project, for civil works construction and resettlement and compensation. Construction works were procured in Vietnam following GOV procurement regulations and procedures and managed by the PMUs. Following the basic designs provided by the AMC, the PMUs were thereafter responsible for managing the detailed design process, preparing bidding documents, and tendering construction contracts etc. They were also responsible for supervising the construction schedule and outputs and supporting installation and commissioning of electrical and mechanical equipment.

It is important to note that, under this arrangement, there were no formal 'co-signatory' provisions between the AMC and the PMUs for design and construction contracts, or payments to contractors and such like[8]. Instead, the Subsidiary Arrangement (SA) included a

[6] The ICR team received assurances from the PMUs and PPCs that necessary steps are being taken to make cost-adjustments and to allocate additional funds to complete the unfinished works. Guidelines have been issued by the MPI and MOC for cost adjustment, but this will take some time to move through the system. It is likely that because these works are close to completion they will not be put on hold; however, it is clear that they are subject to the wider process of negotiation and adjustment of provincial investment budgets for all schemes which is currently taking place. It appears the project scheme at greatest risk is the landfill site in Ha Tien.

[7] As set out in Decree No.16 (2005) and Decree No.112 (2006).

[8] This is in contrast to the North Vam Nao Water Control Project and the Cuu Long Delta Rural Water Supply and Sanitation Project, for instance. Under both these projects, the AMC and PMUs had co-signatory responsibility for managing Province Trusts Funds into which GOA funds were channeled. While GOV

number of clauses to the effect that the AMC would be responsible for 'certifying' progress and quality of work, as a basis for payment decisions, although without formal contractual enforcement powers. Under Annex 5 (Section 2)[9] of the SA it is stated that the AMC's responsibilities would include:

- approval of the conditions of contract that would apply to construction contracts within the legal framework of Vietnam;
- joint certification along with the PMU that works have been satisfactorily completed;
- certification to AusAID of the adequacy of design and tender processes and the quality of construction works carried out by local counterparts against standards as a basis for payment of GOA contributions;
- certification of payments from the GOV Trust Fund account for deliverable outputs.

Under Annex 6[10] of the SA it is further stated that:

- Payments [from the GOV Civil Works Trust Fund] to the civil works consultants and contractors shall only be made after there is certification by the AMC of the satisfactory completion of the work.

In practice, these provisions were never put into effect. According to ICR Team discussions with the AMC, after the basic designs were submitted and approved, the AMC was essentially "off-line" with respect to decisions concerning the design and construction contracting process and GOV payments. In addition, it appears the concept of the Civil Works Trust Fund was never fully instituted, since GOV funding was channeled through the Province Treasury. It was not possible, therefore, for the AMC to fulfill this certification role. This is, in principle, a potentially serious short-coming because it means that essential provisions in the Subsidiary Arrangement for establishing a mechanism of joint accountability and ensuring quality control were not followed. Moreover, the articulation of respective roles and responsibilities in the SA essentially means that the GOA (and inter-alia the AMC as its representative) has no accountability for the delays which have occurred on the GOV funded works. While these issues were discussed in early PCC meetings, it appears they were not identified by the TAG nor followed-up formally by AusAID during the project.

The ICR Team has had to assess to what extent this may have influenced effectiveness and outcomes of the project. On the one hand, it is likely that some of the main reasons for the construction delays, such as the delays in design approval and R&C procedures, would not have been ameliorated by a more formal co-signatory arrangement.

On the other hand, the split in responsibilities for design and construction between the AMC and the PMUs appears to have contributed to reduced effectiveness of coordination between the GOA and GOV funded parts of the project. In particular, the various delays to the GOV-funded construction work had the effect of decoupling it from equipment supplies. The early delivery of pumps and equipment from Australia, and the subsequent time-expiry of manufacturers' guarantees before installation provide an example. While the AMC's

---

contributions to construction were less under these projects, the procurement and importation of equipment was made from the Province Trust Funds.

[9] SA Annex 5: Responsibilities of the GOV and GOA.

[10] SA Annex 6: GOV Civil Works Trust Fund Arrangement.

construction supervision inputs were extended to 31 July 2008, technical support and O&M training during commissioning and initial operation has been severely curtailed.

Despite these constraints, it is evident that the AMC established and maintained effective and collegiate working relationships with their counterparts in the PMUs and with the provincial authorities. There is no doubt that the involvement of AMC Construction Advisors was instrumental in improving the quality of construction workmanship. However, the effectiveness of the AMC's supervision inputs could have been improved had these provisions in the SA been fulfilled, or had an AMC representative been given a formal status specifying these supervision responsibilities in the construction contracts.

2.2.3 Water Supply

The project was highly effective in providing rehabilitated, improved and extended water supply systems to residents of the three towns. The water supply sub-components were substantially completed by July 2008 (Bac Lieu, Sa Dec) and in September 2007 (Ha Tien), ahead of completion of other infrastructure sub-components. The AMC reported statistics for the coverage of water supply at project start-up and completion; while the ICR Team made enquiries as to the status of connections in July 2008 and the estimated number of connections by the end of 2008. These results are shown in Table 2.

Table 2: Coverage of Safe Water Supplies

	Indicator	Status at Year / Project Target								
		Bac Lieu			Ha Tien			Sa Dec		
		2001[1]	12/08	Project Target	2001[1]	12/08	Project Target	2001[1]	12/08	Project Target
1	Population coverage in urban wards	32%	63%[2]	90%	18%	79%	90%	38%	87%	90%
2	No. of domestic house connections	6421	10967[2]	15620	NI	5200	5954	7592	12443	12919
3	Continuous (24 hr.) supply	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
4	Minimum pressure	< 1 b	1 bar	1 bar	< 1 b	1 bar	1 bar	< 1 b	1 bar	1 bar
5	Treated water production m3/day	7429	20000	20000	866	8000	8000	11452	16437	16437
6	Full treatment + Disinfection	Partial	Yes	Yes	Partial	Yes	Yes	Partial	Yes	Yes

[1]Info. from AMC / PCR-01 May 2008

[2]No info. for July '08; figure for April 2008, from AMC/PCR-01 May 2008

The project adopted GOV targets for water supply coverage (from the National Orientation Plan for Water Supply) of 90% for urban areas by 2010, and is well on the way to achieving these ambitious targets. The project has been effective in increasing the overall coverage of water supply in the urban wards of the three towns from 32% before the project to an estimated 75% by the end of 2008. New connections will have been installed to around 28,000 households by the end of 2008, or around 140,000 people. This represents 48% of the current total population of the three towns. By the end of 2008, the level of connection for the populations of the urban wards will be 63% in Bac Lieu, 79% in Ha Tien and 87% in Sa Dec.

The project also aimed to provide safe drinking water 24 hours per day at minimum pressures of 2.5 bar in town centre areas and 1.0 bar in peri-urban areas; safe drinking water is now being provided 24 hours per day at adequate pressure.

Effectiveness Indicators used in the VWSA-WB National Benchmarking Study of 2001 include: (i) staffing efficiency as measured by the number of staff per 1000 connections; (ii) technical efficiency as measured by Unaccounted-for-Water (UfW); and (iii) financial efficiency as measured by the Working Ratio (Operating Costs / Operating Revenues). Measured according to these indicators, the results of the project are given in Table 3[11].

The reported figures for the staff / connection ratio compare favourably with other urban WSS projects in Vietnam. The figures for UfW in Bac Lieu (36%) and Sa Dec (48%) are still well above the target set by the project (25% by 2008). The reason for this is because the new reticulation systems are not yet fully on line; when they are connected over the next few months it is likely these UfW figures will be substantially reduced.

Table 3: Effectiveness Indicators acc. to VWSA-WB National Benchmarking

Effectiveness Indicator at 07/2008		Bac Lieu	Ha Tien	Sa Dec
1	WSEC Staff / 1000 connections	3.8	6.4	3.9
2	Unaccounted-for Water	36%	3.7%	48%
3	Working Ratio	1.17*	No info	No info

* Latest figure from 3rd Quarter 2006

2.2.4 Drainage

The project is improving drainage for the urban centres of Bac Lieu and Sa Dec. In Bac Lieu, 6.45 km of covered and 4.45 km of open canals are being built in urban poor areas to the north and south of the Bac Lieu River and town centre, together with 19.4 km of secondary drainage pipes and two pumping stations. Completion of the drainage work is delayed but is hoped to be completed by the end of 2009. In Sa Dec, 1.2 km of open canals in a residential area to the south of the city centre are being rehabilitated, together with construction of two pumping stations and 2.2 km of secondary drains. Canal and sluice gate construction is approximately 80% completed, but work is delayed by slow progress on the pumping stations.

The main performance indicators for the completed drainage schemes proposed in the PID[12] included: (i) flooding frequency design goals are achieved in priority areas served; (ii) drain blockage is avoided and regular desludging is minimised; (iii) drain odour is minimised; and (iv) capture of about 90% of dry weather flows.

[11] Project Completion Report, May 2008, Working Paper 6.1
[12] Project Implementation Document, October 2002, Chapter 4, section 4.4.4, p.4-12.

At present, the drainage sub-component is not effective since Indicators i), iii) and iv) are not yet fulfilled. However, the drainage sub-component is potentially very effective, since at completion, all four indicators will undoubtedly be positive. When completed, the canal and secondary drainage works will effectively prevent flooding of poor areas during periods of high tide and rainfall. Pumping stations will enable stormwater to be lifted into the local river system at all stages of the tide; adjustable sluice gates will enable the canals to be flushed out with river water as well as draining rainwater to the rivers.

2.2.5 Solid Waste

All three towns are benefiting from investments in solid waste collection systems and new sanitary landfill sites, which were designed to meet 2010 requirements. However, as of July 2008, system-wide management of solid waste is still only partially effective, since none of the landfill sites is yet fully complete and operational. The various elements are as follows:

Waste collection systems. The objective of this sub-component was: *'To bring about significant improvement to the storage, collection and transfer of solid waste in order to address present problems, deficiencies and constraints, and provide for short term future needs'*. This objective has been effectively achieved in all 3 towns. In each town, coverage has been extended to 100% of the core areas. Significant changes have been made in waste collection methods, with a substantial improvement in the town environment. The project has provided additional equipment (compactor trucks, 60-litre plastic bins, pushcarts) for each town, and the primary method of collection has been altered (depositing in bins not on the street). The Household Completion Survey reported 'a significant change in waste disposal behaviour since 2002'[13]. As result of the improved waste collection services, use of formal collection has increased from 34% to 57% of households, while 95% of households stated their area was cleaner now than 5 years ago.

Sanitary landfill sites. The objective of this sub-component was: '*To bring about significant improvement in environmental and social quality by replacing the present uncontrolled dump sites with a new sanitary landfill'*. This objective has not yet been achieved in any town, due to delays in completion of the landfill facilities. By July 2008, Bac Lieu's site was around 90% complete and is expected to be fully commissioned in October 2008. The facility in Sa Dec is approximately 60% complete and is expected to be completed at the end of 2008. The facility in Ha Tien is approximately 35% complete; construction progress is slow and the facility is unlikely to be completed until around mid-2009. In both Ha Tien and Sa Dec, wastes continue to be delivered to the old uncontrolled dump sites. The desired significant improvement in environmental and social quality has not yet been achieved.

This sub-component has the potential to be very effective when the facilities are complete. The design of the landfill sites includes sealed cells to prevent seepage of leachate; hazardous waste will be separated from general waste; and leachate collection and treatment systems will also be provided.

The project also had the intention of reducing the quantity of waste going to landfill by composting the biodegradable fraction of domestic and industrial waste. However, this objective of setting up composting operations has not been implemented in any town, although discussions have been held with a potential private-sector operator in Bac Lieu.

[13] Project Completion Report, May 2008, Working Paper 6.8, Section 3.5, p.19.

This component included a number of smaller-scale facilities. Incinerators for infectious wastes have been provided at the town hospitals in Bac Lieu and Ha Tien and are now fully operational. Two portable public toilets are operational in each town, plus 6 permanent public toilet blocks have been provided in Bac Lieu, 5 in Sa Dec and 4 in Ha Tien.

2.2.6 Community Development

The high level of effectiveness of the various activities under the CD Component was emphasised by all stakeholders during the ICR mission. This was evidently one of the most successful and widely appreciated components of the project. It has also had positive and quickly realised environmental, social and health-related impacts. The project has effectively demonstrated the value and mechanisms through which a comprehensive approach to community and household sanitation and environmental improvement can be implemented with good results. This is a good model for similar urban projects in future.

The CD Component included a range of activities and funding instruments for both public and private facilities, combined with IEC work and community liaison (see Section 2.1.6 above). The main reported outputs and results of these activities are as follows (see also Annex 2):

- **Environmental Health Micro Activities.** In total 453 small-scale sub-projects were constructed under the EHMA including 40,700m^2 of neighbourhood pathways, 6km of neighbourhood drains, and a range of school facilities in the 3 towns. These benefited around 7,000 households and 29,400 school children and teachers. The beneficiaries and GOV agencies each provided around 20% of the cost, with the GOA providing the balance of A$1 million budget; the cost per beneficiary is approximately A$15.
- **Sanitation Credit Scheme**. The SCS was effectively established and is continuing operations in each town under the TWUs with nearly 4,400 septic tank toilets constructed with project support. Under the similar **Biogas Credit Scheme** 131 biogas tanks were constructed. 22,400 poor households have been the direct beneficiaries of these schemes. Local environmental improvements have been obtained through better on-site treatment of household and piggery wastewater.
- Environment improvements through the **Schools Sanitation Program** (SSP) have been completed, benefiting 30 schools and more than 12,300 children and teachers.
- The **Community Advisory Committees** (CACs) are reported to be still operational in all 3 towns. Some of the CD and IEC programs, including the SCS, are being continued by Town Peoples Committees with local funding since late-2006.

Effectiveness of this component can be considered from a number of angles, including: (i) overall management of the schemes (contributing to efficient use of the resources); (ii) the level of integration achieved (contributing to local ownership and sustainability) and (iii) the scale of activities (contributing to widespread benefits and impacts). On all these fronts, the CD Component has generally been effective.

One potential danger with this approach is that the activities may become fragmented and lack adequate coordination and synergy. In this case, the ICR Team believes that sufficient attention was given in both the design and implementation of the CD Component to ensure good integration. From the beginning, the activities were closely linked to the Town and Ward administrations and TWUs, and training was geared to handing-over the activities to the counterpart agencies. The IEC inputs were closely linked to the other sub-components rather

than being a stand-alone activity (which happens in many projects), which has increased effectiveness of these inputs. An appropriate range of IEC methods was also employed.

With respect to the scale of activities, the SCS in particular has operated at a scale which significant impacts and numbers of beneficiaries have been reached. It is possible that the EHMA could have been expanded with additional resources without incurring a major increase in either AMC or PMU time and effort; this would have increased the benefits and impacts of the EMHA (although this is not a major shortcoming).

2.2.7 Institutional Capacity Building and Training

As described in Section 2.1.7 above, the ID Component involved an ambitious program of activities aimed at improving WSEC staff knowledge and skills across both 'technical' and 'non-technical' subjects and broader institutional capacity building for strategic planning. The effectiveness of this component needs to be considered in terms of (a) how effectively it was delivered and (b) to what extent the intended outcomes have been achieved.

The ID Completion Survey[14], conducted by the AMC in 2006, indicates that across a range of subject areas, managers and staff of the WSECs consider that their knowledge, skills and capabilities had improved since 2002. According to the respondents, the greatest change in all WSECs, and the most widely appreciated aspects of the ID Component, were in 'customer services' and 'management systems'. The support for 'company development planning' was also appreciated, with 'asset management' and 'financial management' to a lesser degree. Shortcomings were also noted by the respondents, particularly in terms of selecting the right people for training and that not enough resources were devoted to the ID activities.

The Completion Survey Report concludes that '…the most successful parts of the ID program have been in customer service and technical aspects', while 'The weakest areas have been in facilitating change and improvement in financial management and tariffs…This is despite a concerted effort in this area particularly in early years of the project'. The Report also generally concludes that the ID Component has 'provided clear positive results and impacts, but it fell short of achieving the results it could have'.

These conclusions broadly concur with opinions expressed to the ICR Team during our mission. Triangulating between the different sources of information, it is clear that the most effective aspect of the ID Component has been in improving the quality and performance of customer services provided by the WSECs. This is the opinion of the AMC and WSEC staff themselves, and is supported by the results of the Household Completion Survey conducted in 2008 (see Section 2.4.1). This is a notable achievement of the project.

The training strategy adopted by the project was appropriate and generally effective. This included a combination of: (i) a majority of training provided by national and international TA personnel (directly through the AMC); (ii) some regular courses commissioned from national and provincial training institutions; (iii) training provided by equipment suppliers at the time of installation; and (iv) a series of provincial and inter-provincial workshops to exchange experience and discuss important topics (e.g. Customer Development Conferences).

[14] Institutional Development Completion Survey, 2006, PCR Working Paper 6.7.

The most critical factor which has limited effectiveness lies in the scheduling and timing of the delivery of training. It appears that some courses were provided too early in the project cycle, particularly those related to system-wide management and O&M of the major water supply, solid waste management and drainage facilities. This is partly a result of the delays in construction and consequent lack of synchronicity between the GOV and GOA funded inputs. At the same time, effectiveness could have been improved if more resources were devoted to ID and had been weighted more towards the post-completion stage of project infrastructure.

The project made a concerted attempt to strengthen WSEC management capacity and capability. This was through the provision of office equipment; office automation systems and associated software for accounting, billing and GIS-based customer management; asset-based financial management; and Key Performance Indicator (KPI) reporting systems following international standard practice. During the ICR mission, WSEC managers gave generally positive feedback on the quality of these inputs and systems. However, one main shortcoming is that, in some cases, the office automation systems are not being fully utilized. A number of reasons are given for this including the lack of full-time IT staff, frequent staff turn-over and the fact that GOV reporting systems and requirements are not based on these systems.

2.2.8 Targeting

Although not specifically a poverty reduction project, the 3DT Project included a number of targeting mechanisms to increase the participation and benefits going to poor urban residents and vulnerable groups. This was a main focus of the CD programs. Poor households and women-headed households have been the main recipients of loans under the SCS. Around 35% of households benefiting from the EHMA are also poor. Significantly, the Household Completion Survey conducted in 2008 indicates that water supply and sanitation activities have led to similar (or better) improvements for the lowest income group (quintile) compared to better-off households (see Section 2.4.2 & Table 4). Some disadvantaged groups, such as the Khmer in Ha Tien, have undergone major changes in hygiene practices, adopting sanitary toilets, hand washing and cleaner living conditions.

In all 3 towns, free or subsidised water supply connections have been provided by the WSECs to poor and women-headed households. Drainage does not specifically target either individuals or households, but the drainage works in Bac Lieu and Sa Dec will serve areas occupied predominately by lower-income households. Rehabilitation plans for two particularly disadvantaged urban wards in Bac Lieu (Wards 2 & 5) were completed and incorporated into tertiary drainage planning and design. These represent an effective range of targeting mechanisms for enhancing the benefits and impacts for poor households.

2.2.9 Resettlement and Compensation

The project necessitated land acquisition and some resettlement of households affected by the construction works; this was mainly along the drainage alignments in Bac Lieu and Sa Dec and at the landfill sites. In total 1,905 households were affected and eligible for compensation.

A Resettlement Policy Framework (RFP) was included as an attachment to the SA[15], which included provisions to augment the existing R&C regulations of the GOV[16]. The RPF was

[15] Subsidiary Arrangement Annex 8 & Attachment A.

endorsed by the PCC in August 2002, following which Resettlement and Compensation Councils were established for each town. The project adopted a phased approach to resettlement planning through which a series of Resettlement Action Plans (RAPs) were prepared on a rolling basis for each stage of construction. Initially, it was found that the RPF requirements were too complex, lacked relevance to the reality of the situation on the ground, and there were difficulties in linking it to the required steps and obligations under Vietnamese law and R&C procedures. The project proposed some adjustments to clarify and simplify the RPF requirements which were subsequently agreed by AusAID.

The project has been effective in handling the R&C process to the extent that the agreed and required procedures and safeguards have been fully complied with. Supervision and monitoring has been adequate, including: regular TAG visits focusing on R&C issues; the mobilisation of additional R&C specialists by the AMC to provide support and training (these inputs created a large additional workload for the AMC); and independent consultants hired by the PMUs to make the assessment of asset and compensation amounts.

As found in many other urban infrastructure investment projects in Vietnam, however, the slow R&C process and procedures have contributed significantly to the long delays experienced in preparation and completion of the construction works (particularly in Bac Lieu). In particular, the lapse in time between the approval of technical designs and compensation rates and commencement of construction (up to 2 years intervening period for some works) meant that compensation rates were out-of-date and had to be re-negotiated[17]. The slow R&C process is not, in itself, necessarily an indication of lack of effectiveness; rather, it may be an indication that due diligence is being paid to the procedural steps and that the rights of residents are being upheld. Nonetheless, experience from this project re-inforces the need to begin as early as possible on providing public information on resettlement requirements and making the assessment of assets involved, while setting compensation rates according to market prices at the time of beginning construction.

2.3 Efficiency

2.3.1 Cost Benefit / Economic Analysis

An economic analysis was carried out in 2002 as part of the project design. A final economic analysis, based on out-turn costs to May 2008, was carried out by the AMC in May 2008 as part of the project completion activities. The ICR team has reviewed the final analysis, which appears in an Annex to the PCR (Working Paper 6.9).

The analysis shows that the project has overall EIRRs varying between 14.8% and 23.3%, depending on component, with an overall EIRR of 17%. These percentage returns are in a

[16] Key provisions in the RPF inluded: (i) all affected persons will be entitled to compensation; (ii) full replacement cost will be the basis for compensation; (iii) rehabilitation measures will be provided; (iv) a grievance mechanism will be established; (v) consultation with the affected households will take place; and (vi) independent monitoring will be carried out.

[17] For example, on the Ca Phuong drainage works, compensations was paid to households based on 2003 prices, while construction did not begin until 2005. In the intervening two years, the cost of house construction had risen, with the reported price of steel rods in the order of VND8000/kg whereas the compensation rate was not more than VND4000/kg.

normal range for water and sanitation projects in Vietnam, albeit at the high end of the range. The final analysis, like the initial analysis at PDD stage, is highly detailed and appears to take all relevant factors into account. Assumptions are well explained, all factors used are in a reasonable range and the analysis appears to present a reliable picture of the situation.

Some aspects of the analysis may be queried. For instance, capital costs for project management and TA are not included, whereas benefits are included. The analysis also assumes that an adequate revenue flow and cost-coverage can be ensured for operations and replacement costs. Likewise, sensitivity analyses were made on the results, but Unaccounted for Water reduction was not factored in. UfW reduction does not yet appear to be reducing to the levels expected in the project design (25%). These factors might reduce the final EIRR to some degree, however, it is likely the overall rate would remain in a positive range.

Reported Benefit:Cost Ratios for the different components of the project were: Water supply 0.9; Drainage 0.4; Health (sanitation) 0.9; Health (IEC and CD) 6.8. The good value for money of the IEC and CD elements of the project were clearly demonstrated. The drainage sub-component showed as the least cost-effective element, mainly due to its high capital cost.

2.3.2 Procurement and Construction Process

Procurement processes were divided according to the split in funding. Recruitment of TA and procurement of equipment under GOA funding was carried out under GOA tendering procedures and forms of contract. Procurement of civil engineering construction packages followed GOV procedures, including following standard design milestones and technical appraisals prior to tendering. Construction contracts were tendered, bids evaluated and contracts managed under Vietnamese rules and forms of contract.

Australian-funded procurements were effected in a timely manner and within budget. Implementation of the AMC contract proceeded smoothly and has been reported as generally satisfactory. The equipment supply contracts were let to Australian companies, with goods being shipped to Vietnam and installed and commissioned by Australian technicians.

The Vietnamese construction contracts suffered by being split into many small works packages. Irrespective of contract size, each step of the procurement process, starting with design reviews and finishing with bid evaluation, has to undergo multiple, often redundant, review-and-approval procedures within the local government system before contracts are signed and construction started. Bureaucratic delays in approvals at all stages were endemic.

As early as 2005, it became clear that construction of many packages would not be complete by the planned date of November 2007. Construction contracts were let under Vietnamese contract format using standard cost-rates issued by GOV for individual items of work. Difficulties were met in coping with cost or work variations, particularly in the later stages of the project, when materials costs were rising at over 20% per annum. Contractors have suffered severe cash-flow difficulties and have responded by slowing work on site. It is now clear that some packages (e.g. the landfill site at Ha Tien) may not be completed until 2009.

Contracts, as packaged, were in many cases too small to attract major construction companies. Packaging of civil engineering works into one or two larger packages per town could have brought advantages of scale and attracted larger contractors. Some larger contract packages were planned, but eventually broken down into smaller packages due to lack of bids, and lack

of interest by bigger contractors. Even when larger national contractors were appointed, they mostly sub-contracted the work out to small local firms, with the result that works were implemented by lower skilled sub-contractors.

2.3.3 Technical Assistance

TA inputs through the AMC represented 36.6% of the GOA contribution and 23.4% of the total project costs. This is high compared to other loan and grant financed projects in the urban WSS sector. Even so, the value of having consistent AMC / TA support over the life of the project (as compared to more fragmented inputs under many loan financed projects) was specifically mentioned as a comparative strength of the 3DT Project by the Ministry of Construction representative during the ICR mission.

With respect to the sourcing and management of the TA inputs, this seems to have been efficiently and effectively managed. It is clear that responsive and professional working relationships were established and maintained between the AMC and the provincial agencies and officials at all levels. There was a high degree of continuity in the individuals associated with the project over time which was undoubtedly beneficial. The AMC was conscientious in following-up and integrating the outputs of short-term TA personnel visits. With a few minor exceptions, there were generally favourable comments about the quality and suitability of the selected experts from the counterpart agencies. The ICR Team believes this is a good instance of 'development effectiveness' in areas important to AusAID such as in building productive partnerships and delivering Australia's aid program with excellence.

2.3.4 Value for Money

As an indicator of value for money, Table 3 gives costs per capita population of the urban wards (the target populations) for each of the main components.

Table 3: Per capita costs of project components

		Bac Lieu		Ha Tien		Sa Dec	
Population of urban wards in 2008[18]		86,781		33,081		71,777	
Component		Cap.Cost[19] A$x10^3	Cost/ Hd. A$	Cap.Cost[9] A$x10^3	Cost/ Hd.	Cap.Cost[9] A$x10^3	Cost/ Hd.
1	Water Supply	8.968	103	9,512	288	8,074	112
2	Drainage	19,674	227	182	5	2,030	28
3	Solid Waste	2,639	30	2,795	84	2,662	37
4	Management, CD, ID	8,232	95	7,799	236	7,997	111

[18] See Key Performance Indicators (PCR Working Paper 6.1)
[19] AMC – Personal communication, July 2008

Per capita costs for Ha Tien are markedly higher than those for the other towns, reflecting the town's smaller size and reduced economies of scale. The low per capita cost of the drainage scheme in Sa Dec reflects its limited scope; per capita cost would be higher if the population fraction actually served was used. Management costs, which include all community and institutional development activities except minor material purchases, ranged between 26% and 67% of the combined cost of the investment costs of the three other main components. This reflects the large input of CD and ID in the project design (compared to a recent loan-funded ODA project in which management and ID costs constituted 13% of investment cost). However, the disaggregated cost of CD activities was comparatively small and represents excellent value for money, especially in view of the opinion of all parties on the Vietnamese side that the CD elements of the project were highly successful.

2.4 Impact

The project undertook comprehensive baseline surveys amongst households and institutional partners in 2002 which were followed-up with Completion Surveys[20]. The Household Survey covered a sample of 1,753 households (around 3% of households in Bac Lieu and Sa Dec and 4% in Ha Tien) and the same households were visited for the baseline (2002) and completion survey (2008). The Institutional Development Completion Survey (2006) covered around 40 people (17 managers and 22 staff) in the WSECs.

2.4.1 Water Supply – Services and utilization patterns

The methodology and results of the Household Survey are generally robust with respect to patterns of water use, allowing a preliminary assessment of these impacts to be made. As indicated in Section 2.2.3 above, the project has been effective in increasing overall coverage of water supply to households in the urban wards. With respect to quality of these services, the completion survey indicates that over 90% of households expressed 'satisfaction' with the service aspects, including: application and connection procedures; maintenance and repairs; piped water regularity; meter reading and payment. This reflects the project's strong focus on improving the customer service orientation of the WSECs and their staff. Satisfaction with water quality has also increased, with around 66% of households in Bac Lieu and Ha Tien and 50% in Sa Dec being 'very satisfied' with water quality.

Across all three towns, there has been a marked increase in the proportion of households using piped water for drinking and cooking purposes, with a concomitant decrease in the use of canal and river water. Moreover, these changes in behaviour are evident for both higher and lower income groups (see Table 4). The proportion of people using piped water for drinking, averaged between wet and dry seasons, has increased from 14.5% in 2002 to 22% in 2008, and for cooking from 30% in 2002 to 39% in 2008. There has also been an increase in usage of bottled water, partially offsetting the increase in use of piped water for drinking purposes. While boiling drinking is widespread practice, and the use of alum is common in some localities, there has also been a noticeable increase in the use of water filters. These positive changes in patterns of domestic water use are broadly in line with those reported in studies from other parts of the Mekong Delta in recent years.

[20] Institutional Development Completion Survey (PCR Working Paper 6.7); Household Completion Survey Report (PCR Working Paper 6.8).

Table 4: Water and Sanitation Indicators		
Water and Sanitation Indicator	Change in Indicator 2002-2008	
	Highest Income Group	Lowest Income Group
Use of Piped water for drinking (wet season)	+ 6%	+ 5%
Use of Piped water for drinking (dry season)	+ 13%	+ 9%
Use of river/canals for drinking (wet season)	-3%	-17%
Use of river/canals for drinking (dry season)	-17%	-24%
Use a fish pond toilet	-5%	-16%
Pour flush toilet is used	+ 25%	+ 35%
Soap for hand washing near toilet	+ 6%	+ 23%
Solid waste collection is used	+ 22%	+ 21%
Dwelling type is temporary house or other	-4%	-14%

2.4.2 Social Impacts – Sanitation awareness and health

The Household Survey indicates that there have been positive impacts in terms of increased awareness about household and community sanitation, and beneficial changes in health-and-hygiene related behaviour, with possible secondary impacts on health. In particular, there has been a widespread increase in the useage of septic tank toilets and a concomitant decrease in fish-pond toilets, together with improved hygiene practices as indicated by the presence of soap near toilets. Again, these changes cover both higher and lower income groups (Table 4).

- In Bac Lieu, septic tank toilets have increased in coverage from 56% in 2002 to 85% in 2008 (15% of households still use unhygienic toilets). purposes than in 2002. The presence of soap at the toilet has increased from 64% of households to 81%. Use of solid waste collection service has increased from 34% to 57% of households.
- In Sa Dec, septic tank toilets have increased in coverage from 42% to 82% (around 18% of households still use unhygienic toilets). The presence of soap at the toilet has increased 30% from 54% of households to 85%. Use of the solid waste collection service has been impressive, increasing from 40% to 72% of households.
- In Ha Tien, septic tank toilets have increased in coverage from 48% in 2002 to 79%. Use of the solid waste collection service has increased from 35% to 57%.

The Household Survey further indicates a reduction in reported health problems (including diarrhoea, eye and skin related problems, and women's gynaecological problems) which may be partly attributed to the water and sanitation improvements and IEC activities. However, one main weakness with the Household Survey is that a control group was not established, which means that these changes health-related behaviour, and health impacts in particular, cannot be fully verified. The survey did not make use of time-series epidemiological data from the Department of Health, but rather self-reporting on health problems for one period of the year. Given the large seasonal variations (between the flood and dry seasons) that are known to exist for the incidence of such health problems in the Mekong Delta, the survey would have been more robust if these temporal variations and supporting epidemiological and control group data were incorporated into the survey.

The positive changes in behaviour patterns cannot be attributed solely to the project. For example, many septic tanks have been constructed by households themselves as well as with project support, and the local government authorities and mass associations have wider programs of health and sanitation awareness and promotion. Nonetheless, it is clear the project has 'added-value' to these initiatives in a number of important ways including funding support (through the SCS and EHMA programs), IEC programs and capacity building for the delivery organisations.

More broadly, the project has also has a positive impact on improving community relations and interactions with the Ward and Township authorities through the Community Advisory Committees and the EHMA program. In particular, the Women's Union has been an active and engaged partner in many aspects of the project in each town, and the capacity of the Women's Union has been greatly enhanced by the project in managing the SCS, conducting IEC programs and community surveys etc.

2.4.3 Environmental Impacts – Urban living conditions

The physical impact of the improved water supply systems, in terms of their effect on the urban landscape and planning of the three towns, is minimal. The environmental impact is also small, though not negligible. Increased abstraction from wells in Bac Lieu may result in drawdown of groundwater levels. Groundwater levels will need to be monitored periodically (although it was reported that saline intrusion does not occur[21]). Raw water for Ha Tien is now abstracted from a reservoir in neighbouring An Giang Province; reservoir levels should be monitored during dry seasons to protect against over-abstraction. Raw water abstraction for Sa Dec is unlikely to have any appreciable effect on flows in the Tien River.

Increased use of the piped water supply in the urban centres will lead to increased discharges of washing water, grey water and sewage to the tertiary drainage systems, but also onto lanes and streets. The project has made considerable strides in promoting construction of domestic septic tanks, and this effort should be continued. In the absence of wastewater interceptor systems, additional wastewater flows will find their way into drainage canals and rivers. Promotion of a project for wastewater collection and treatment, deleted from the 3DT Project due to lack of funding, should now be considered a top priority.

The drainage works in Bac Lieu and Sa Dec have various environmental impacts. During construction, local residents have been subjected to dust, mud and noise as well as disruption by construction traffic. These negative impacts have been extended in time but are transitory. In the longer term, the creation of new covered and open drainage canals, and the operation of the flushing facility, will have a very positive environmental impact on the urban communities, reducing flooding, smell and visual nuisance. In the case of covered canals, vehicle access to canal-side properties will be improved. Flushing of canals will have to be carried out with regularity, to prevent deposition of sludge and creation of anaerobic conditions in the canals.

In terms of the urban environment, the rehabilitation of drainage canals with stone linings and maintenance roads, combined with improved solid waste collection, will create a positive amenity value. The small-scale initiatives under the EHMA have had a positive impact in

[21] Bac Lieu WSC, Meeting 17 July 2008

terms of improving the quality of life in urban wards and schools, as well as increasing community awareness and responsibility for the local environment.

2.4.4 Strategic impacts – Integrated approaches to urban planning

In the PDD (from 2001) the project originally included a fairly ambitious 'Urban Development Program' under the Institutional Development component, which was geared towards strengthening strategic planning capacity through Urban Master Plan development and budgeting[22]. It was intended that Working Groups should be established in each town to carry this work forward with the support of the AMC. However, once the project started it became apparent that the scope and ambition-level of this activity was too large, primarily because the respective provincial agencies and the project itself did not necessarily have the mandate to formally engage in urban master planning at this level.

In the Project Implementation Document (from 2002) this activity was therefore scaled-back to focus on an 'Infrastructure Investment Coordination Program' (IICP) which was more directly related to coordination of the project works, and convened through ad-hoc Coordination Groups. The primary output from this work was an IICP Toolkit. This Toolkit was introduced at a PCC workshop in November 2003, and circulated to provincial agencies in March 2004. It was acknowledged by AusAID that it was not within the AMC's scope to further pursue this at national level, but subsequently AusAID organised a meeting in Hanoi in November 2004 attended by the Ministry of Construction (MOC), the World Bank, ADB and other donors. It was suggested that MOC should further develop and test the proposal in some pilot locations in other small towns. It appears this did not take place, possibly due to a lack of funds.

The influence of this work on strategic thinking, either at province or national level, is not clear. The Project Completion Report generally concludes that while the IICP Toolkit represents a 'suitable outcome', the original objectives of this activity were not achieved[23]. This viewpoint was echoed by the MOC representative during discussions with the ICR Team, such that outcomes of this activity were not particularly effective in terms of the time and money invested. At the same time, the MOC confirmed that the 3DT Project has influenced national thinking and policies in a number of ways, including, particularly, the value of integrating strong CD and ID components into urban infrastructure projects.

2.5 Sustainability

As indicated above, project completion has, rather unfortunately, coincided with a period of rapid escalation of costs which has caused further delays with the result that several of the major construction works are still incomplete. This presents a rather uncertain scenario for assessing sustainability since full commissioning and system-wide introduction of these facilities has yet to take place. Sustainability therefore needs to be considered in both the short-term and longer-term perspectives.

[22] Planning Component End of Assignment Report (PCR Working Paper 6.4).

[23] The AMC suggests that a more concerted program would be required at national level to address the considerable constraints that exist in coordination of urban infrastructure investments (Annex B / WP 6.4).

2.5.1 Technical and Operational Sustainability

The newly-created facilities will pose varying degrees of challenge to those charged with operating them; broadly speaking, the facilities can be divided between collection and distribution systems (water distribution, drainage, solid waste collection) and production and disposal systems (water treatment plants, solid waste landfills).

The new distribution and reticulation networks for water supply, canal drainage, and solid waste collection are well known to the management and operatives of the WSECs, Public Works Section and Urban Services Centres in the three towns. These systems can be effectively operated and managed.

The water treatment plants (WTPs) and landfill facilities are new technology for the agencies concerned, which will present greater operational challenges. They are appropriate technology. The WTPs are comparable to those now being constructed under other urban projects in Vietnam. The sanitary landfill sites, although comparatively new to Vietnam, will increasingly become standard practice over the next few years. The project provided extensive staff training (residential courses on WTP management, courses for water chemists, training on landfill management etc.), but due to delays in construction and the consequent decoupling of the GOA and GOV funded elements of the project, training courses were held well before completion of the facilities. In overall terms, these technologies are within the capacity of the local authorities and technical agencies to manage on a sustainable basis. These gaps in O&M training at project completion, however, may result in some operational shortfalls.

Water treatment plants. Staff of the AMC and the Australian equipment suppliers have given instruction on the operation of the WTPs, but some WSEC managers expressed a lack of confidence in their ability to cope in the event of breakdown. There is also some concern for the long-term sustainability of the operation software for the water treatment plants (although the software is not essential for the operation of the plants). The main concerns variously expressed were: (i) lack of operational training for WTP workers (site managers only given training); (ii) no knowledge of what to do in the event of a major breakdown; (iii) lack of detailed drawings of pumps and other equipment; (iv) no local agents in Vietnam to assist in the event of equipment breakdown; and (v) no spare replacement units for some items such as pumps and operating software.

WSEC managers have a ‘mutual support’ network with managers of other water supply companies having the same equipment; this should aid problem-solving during breakdowns. If the AMC is able to provide further operator training for the WTP managements, as well as supporting the WSEC’s to develop strategies for dealing with breakdowns, the ICR Team is confident that the WSECs will be able to tackle normal operations and minor breakdowns with relatively little disruption to service. The WSECs, with AMC support, should identify locally-based companies willing to import and hold stocks of spare parts for the foreign equipment, so as to avoid prolonged downtime in the event of major breakdowns.

Landfill sites and systems. The AMC has provided, and will continue to provide, short inputs for training on operation of the new landfills sites. However, doubts were expressed by PMU managers to the ICR Team about the correctness of the design of the landfill systems, citing difficulties with the control of storm water and, in particular, the need to provide soil cover for the compacted waste. While the designs are normal for the type of facility, the anticipated operational difficulties seem to arise out of a lack of appreciation of the method of

system-wide operation of the sanitary landfills. More effort was, and is, required to acquaint the operating authorities, at all levels, with the concept and operational needs of the technology. Moreover, on completion the responsibility for the landfill sites will be handed over to the Public Works Section or Urban Services Centres in the three towns which have less experience. The operational sustainability of the systems is therefore still uncertain.

While all the above matters may well have been covered during training and day-to-day interaction with AMC staff, operators may not have had time to 'absorb' this knowledge fully due to the short duration of the training sessions. The level of operational training was on a similar level to that given under many loan-financed ODA projects. Nonetheless, the amount of 'downstream' technical assistance appears to have been disproportionately small compared to the large 'upstream' technical assistance and training provided.

2.5.2 Financial and Institutional Sustainability

Water supply and Waste collection. Financial sustainability of these components needs to be assessed both in terms of shorter-term cost coverage and longer-term financial viability. Although the technology level of the new facilities is appropriate (e.g. lower-technology solutions would not necessarily have been any more cost-effective, or for solid waste disposal, would have been environmentally unacceptable), the respective WSECs and other agencies will be faced with additional operation costs, mainly because of the increased size of the undertakings. These increased costs should ideally be paid for out of revenue derived from water tariffs and solid waste collection charges. The ICR Team noted with concern, however, that water tariffs and collection charges at their present level will not provide operating authorities with sufficient revenue to cover these additional costs.

For instance, the PDD calculated that the necessary water and drainage tariff for Bac Lieu to allow full cost recovery at VND 4,291/m3, with a solid waste collection charge of VND 25,294/HH/month – all at March 2000 prices[24]. The current water tariff in Bac Lieu is VND 3,300/m3 and the domestic waste collection charge is VND 10,000/HH/month. Other towns face a similar situation. The Ha Tien WSEC has even been made to reduce their previous domestic water tariff of VND 7,000/m3 to VND 5,000/m3.

While the AMC worked with the WSECs and province authorities to establish viable tariff regimes, it needs to be recognised that tariff rates continue to be determined as much by broader social and economic concerns as by financial viability. In the current climate of inflationary pressure, for instance, the GOV has instructed the provincial authorities not to allow an increase in water charges at this point in time.

The political and social importance of providing affordable water supply for the majority of the population is recognised. Nonetheless, unless realistic tariffs for water supply and solid waste collection and disposal can be ensured, operators will either be forced to continue to seek subsidies from the province authorities or face the prospect of cutting operating costs and/or deferring maintenance. All WSECs expressed doubts that they would be able to run the new facilities without financial losses in the short-medium term. In the case of the water supply systems, the technologies are robust; reduced maintenance inputs will impair, but are unlikely to have a serious impact on service. For solid waste collection and disposal, inadequate operating budgets will not prevent the systems from operating, but insufficient

[24] PDD Appendix 8, pp 8-4 to 8-7, Tables 1, 3, 5.

funds (e.g. to purchase soil for cover at the landfill sites) will have a significantly adverse environmental impact.

Provision of adequate safe water supplies is seen as a high social priority by the authorities. The risk that they will deny the WESC's sufficient subsidies to operate their facilities is therefore low. It appears that the new landfill systems may be under particular jeopardy, since these will involve a range of additional and increased costs for the Public Works Section and Urban Services Centre which are largely dependent on subsidy support, while at the same time, sanitary solid waste disposal is not given such a high social priority by the authorities.

Sanitation Credit Scheme. With respect to the revolving funds under the SCS, the prospects for sustainability are good. The project adopted a successful strategy for handing-over full responsibility for managing the SCS to the TWUs in 2006-2007. The Scheme is continuing in all 3 towns, with a reported increase in the capital base and steady increase in the number households applying for and obtaining loans. In Ha Tien, the loan size was increased to VND 2.5 million in 2007 to cover the increased spetic-tank construction costs, and other provinces intend to follow this. The project also provided training for local artisans and small-scale enterprises to strengthen the supply side. This is a good example of promoting sustainable approaches to sanitation improvement through simple market mechanisms.

EHMA grant mechanism. Under the EHMA the project provided small grants for small-scale urban upgrading initiatives that were planned through the Community Advisory Committees and implemented through a system of 'economic contracts' between the Ward People's Committees and local contractors. The procedures for this appear to have been simple and efficient. This mechanism undoubtedly has potential for wider application in future projects and programs in the urban sector, since the benefits and impacts are widely appreciated. However, sustainability in this context is not assured. There appears to be no obvious source of province funding to maintain the EHMA. In addition, while a small-grant mechanism such as this can be easily established under the umbrella of a 'project', broader GOV legislation (in particular the Law on Procurement) still does not have provisions for small-scale investment activities managed by the Ward / Commune authorities.

3 OVERALL QUALITY

This section summarizes overall quality of the initiative based on the foregoing analysis. This focuses on quality of the project as a whole. Given that the project covered three provinces and involved many partner agencies, it is recognized that a range of factors have influenced quality aspects. This assessment is therefore not intended as a reflection on the performance of any of the individual partners (the AMC, GOV counterpart agencies nor AusAID) but of the entire project as a collaborative initiative.

Definitions of Rating Scale:

Satisfactory (4, 5 and 6, above the line)
6 Very high quality
5 Good quality initiative; could have improved in some areas with minor work
4 Adequate quality initiative; could have improved with some work

Less than satisfactory (1, 2 and 3, below the line)
3 Less than adequate quality initiative; needed improvements in core areas
2 Poor quality initiative; needed major improvements in core areas
1 Very poor quality initiative; needed a major overhaul

►1) To what degree did the initiative achieve its objectives, and how well did they contribute to higher level objectives in the program strategy?	**4.5**

As described in the Introduction, the Goal of the 3DT Project indicates three inter-related sets of project outcomes and impacts according to which overall quality can be assessed.

- First, to *'improve the welfare of residents'* – which may be evident, for example, through changes and improvements in health status and behaviour, economic opportunities, quality of life, and quality of the urban environment etc.
- Second, to *'rehabilitate and extend facilities and services'* – which covers the technical quality and performance of the engineering works and service systems;
- Third, to *'develop capacity of local institutions and community groups'* – which is seen as a pre-requisite for sustainable management of these service systems.

Across all three aspects, the project has clearly demonstrated high potential achievement and good progress towards achieving its objectives. This is especially with respect to: the improvement in water supply systems and services; enhancing the customer-service orientation and day-to-day management capacity of WSECs; the demonstrated benefits and impacts under the CD component; the widespread improvements in household sanitary conditions and practices amongst both lower and higher income groups; improvements in the urban environment and quality of life associated with the solid waste collection systems and the EHMA schemes; and strengthening the role of women in water supply and sanitation planning and implementation amongst others. These are clear positive outcomes.

At the same time, project effectiveness and outcomes have been reduced by non-completion of some of the major infrastructure facilities in drainage and solid waste disposal. The project's original intentions to strengthen strategic planning capacities for integrated urban

infrastructure planning and coordination have also not been fully realized. These latter activities constituted a relatively small, but nonetheless important, sub-component since they were geared towards the higher-level strategic objectives.

►2) How robust was the system to measure ongoing achievement of objectives and results?	5.5

Monitoring and evaluation under this project was of a high standard as compared to many other projects. Comprehensive institutional, household and economic base-lines were conducted which have been adequately followed-up with in-depth completion surveys. The methodology, results and conclusions of these assessments are generally robust; while the household survey would have been strengthened with the inclusion of a control group, and reference to health statistics, to better ascertain changes in health and hygiene related behaviour and health impacts. A good attempt was made to introduce best-practice performance management and customer service monitoring systems in the WSECs. Regular reporting by the AMC has been comprehensive, well explained and justified. Monitoring has used an appropriate combination of output and outcome indicators.

►3) How effectively was the initiative managed? To what degree did it provide good value for money?	4.5

In overall terms the project represents good value for money and has been effectively managed. Reported figures for Benefit:Cost Ratio and cost-per-capita indicate good value for money, especially for the CD Component activities. TA inputs through the AMC have been highly valued and efficiently and effectively managed. Responsive and professional working relationships were established and maintained between the AMC and counterpart agencies. The one main weakness in the project management, coordination and implementation arrangements has been the lack of synchronicity between the GOA and GOV funded parts of the project. Associated with this, essential provisions in the Subsidiary Arrangement to establish a mechanism of joint-accountability were not followed, which has had some influence on quality and timely delivery of the intended outputs.

►4) How appropriate is the sustainability of the initiatives outcomes?	4

The non-completion of some of the major facilities presents an uncertain situation with respect to both operational and financial sustainability. This is particularly with respect to system-wide management of the landfill facilities and water treatment plant operations. Staff training was provided, but due to delays in construction and the consequent decoupling of the GOA and GOV funded elements of the project, training courses were held well before completion of the facilities. Unless adequate recurrent funding for operations and maintenance can be ensured (through a socially acceptable increased rate of tariffs and/or continued subsidy from the province/town budgets), operators will face the prospect of cutting operating costs and/or deferring maintenance. All WSECs expressed doubts that they would be able to run the new facilities without financial losses in the short-term. Here again, it appears that the new landfill systems may be under particular jeopardy. Under the CD Component, the prospects for sustainability of the Sanitation Credit Scheme are good. There appears to be strong commitment on the part of the local authorities to maintain the SCS for as long as it is required over the next few years. Continuation of the other CD activities, such as the EHMA and IEC work, will depend on local funding availability and interest.

►5) Was the initiative of the highest technical quality, based on sound analysis and learning?	5

Technical quality of the project has been high. The project explicitly drew on experience from earlier AusAID funded projects in this sector and benefited from a careful preparation process. This contributed to enhancing the appropriateness of the overall project concept and implementation strategy, and relevance of the planned investments and activities. During implementation, effective mechanisms were introduced to promote reflection, analysis and learning both within and between the provinces. The quality of the engineering designs and technical supervision inputs provided through the AMC were of a high standard. The project reflected international best-practice by promoting improved household and community sanitation practice and awareness through a range of mechanisms.

►6) Taking those five factors into account, what was the overall quality of the initiative?	4.5

4 LESSONS LEARNED & CONCLUSIONS

The Project Completion Report of the AMC provides a detailed analysis and list of lessons learned from the 3DT Project – this is a very useful summary to which reference should be made. Rather than repeating the AMC's observations and conclusions here, this section covers two aspects which the ICR Team was requested to focus on in particular: (a) lessons on the design and implementation of integrated urban programs; and (b) lessons on ODA modalities and financing strategies for the urban sector. This is followed by recommendations to AusAID on steps that can be taken to enhance the sustainability of the project outcomes.

4.1 Lessons on Design and Implementation of Integrated Urban Programs

a) The various Community Development activities under the 3DT Project, which were the links which turned the project's infrastructure investments into improvements in the environment and quality of life of the residents, were cited by all stakeholders as amongst the most successful parts of this project. These activities played a much larger role proportionately than in many other similar ODA-financed projects. They demonstrated good value-for-money and had quantifiable impacts even during the life of the project. Similar CD activities should be promoted as an integral part of future urban projects.

b) To be successful, such CD activities need to encompass a range of financing instruments that are adapted to the specific requirements of each activity and to local circumstances. This may include: (i) 'revolving funds' for household sanitation facilities (i.e private goods); (ii) 'small-grants' for small-scale community initiatives managed by the local authorities and communities to upgrade the urban environment (i.e. public goods); (iii) additional concentrated support for capacity-building of the local authorities and communities to manage the above instruments effectively and efficiently; and (iv) providing allowances and appropriate incentives to enable and encourage community representatives to spend their valuable time to take the lead in these types of activities.

c) The 3DT Project has demonstrated the viability and value of simple market-based approaches to the provision of household sanitation facilities (such as septic tank toilets). This is through: (i) on the demand side, IEC to promote household awareness and soft loans to support poorer households in particular to purchase improved facilities; and (ii) on the supply side, training local artisans and small-scale enterprises to construct the facilities with locally available materials. This approach is worthy of wider application in other WSS programs in both urban and rural areas.

d) Multi-sector urban environment projects integrating water supply, drainage and solid waste improvements (as well as wastewater improvements) have the advantage of producing a more obvious positive physical impact on townscape and environment than single-sector initiatives as well as allowing economies of scale in preparation and implementation. Disruption during construction is reduced, at least in terms of time. The multi-sector approach has proved viable and successful under the 3DT Project, and this model should be continued for the smaller provincial cities and district towns.

e) Promoting improved cross-sector and inter-departmental coordination and strategic planning is a pre-requisite for this type of integrated urban infrastructure investment program. The 3DT Project set out with the intention of addressing this issue in a forward-looking way (through the planned Urban Development / Infrastructure Investment Coordination Program), but this had limited success and the project was more-or-less confined to addressing constraints caused by a lack of day-to-day coordination. In future programs, more detailed thought needs to be given to how to address this issue.

f) Wastewater disposal systems play an indispensable role in urban environmental improvement; the cancellation of the original wastewater system improvements due to budget constraints has limited the relevance and outcomes of this project. Sufficient budget should be allocated in future integrated projects to allow wastewater collection and treatment to be included. This is now seen by all stakeholders as a high priority.

g) Procurement procedures for construction contracts in Vietnam are complex and time-consuming; the speed of processing is largely independent of the value of the contract. The project suffered from having too many small construction contracts. Procuring works for primary and secondary infrastructure in fewer, larger-value contract packages would speed up the overall program, and would attract larger, financially sounder contractors to bid. Bids should be invited from pre-selected lists of suitable contractors.

h) For future projects, there will seldom be a need to procure plant and equipment abroad. The commercial sector in Vietnam has now developed to the point where the type of equipment needed for small-town infrastructure works is readily available in-country through local agents, to whom payment for imported equipment can be made in VND.

i) The AMC played a vital role in project management, design, program coordination and quality management. In the 3DT Project, the role of the AMC in construction quality control was somewhat weakened by having no formal enforcement powers ("advisors, not supervisors"). A formal position for the AMC can be integrated into the Vietnamese contractual format, for example, by nomination as 'Owner's Representative'. A mechanism should be found in future AMC contracts to make them more flexible and responsive to delays in design and construction programs, however.

j) Long construction delays due partly to lengthy Resettlement and Compensation processes and procedures are common in urban projects throughout Vietnam. The slow R&C process it not necessarily in itself a problem – since this may denote that the procedures

are working properly and that the rights of residents are being addressed. However, local authorities should be encouraged to commence R&C activities at the earliest possible opportunity, including early identification of land for resettlement sites, and providing IEC for local communities and households at an early stage.

k) Vietnamese supervising authorities (for example, the Departments of Construction), should be encouraged to hire specialized local consultants, if necessary recruited at national level, for the appraisal of engineering designs for water treatment and distribution, drainage and solid waste disposal, of which their own staff often have little experience. Substantial delays in approval procedures can thus be avoided.

4.2 Lessons on ODA Modalities for the Urban Sector

The ICR Team has considered potential options for future modalities to support and finance the urban water supply and environment sector, in light of experience from this project and others in Vietnam. This is in the context of the moves towards harmonization and alignment of ODA according to the principles of the Hanoi Core Statement. This topic was also discussed with the AMC team and with the Ministry of Construction representative during the mission, who gave their opinions based on experience from the 3DT Project. The points made here are not formulated as firm recommendations, but rather as factors that need to be taken into consideration for this particular urban sector.

a) Firstly, it needs to be recognized that large-scale urban infrastructure investments do need to be managed as 'projects' – both according to Vietnamese law and in order to obtain required effectiveness and efficiency in implementation. Dealing with higher concentrations of population and larger-scale works, the urban sector requires a greater level of investment and a higher level of technical and engineering inputs. Irrespective of the overall ODA financing modality (i.e. project-based, programmatic or budget support type mechanisms), therefore, handling these larger investment sums requires efficient and experienced project management capabilities and capacities.

b) These urban investment project management capabilities certainly exist in Vietnam, but are unlikely to be widely present, at least in the medium-term future, outside the larger Class 1 & 2 Cities. For programs which support the smaller provincial and district towns (and the less experienced Water Supply and Environment Companies and Urban Works Sections for instance), it needs to be identified what type of financing mechanism will be most conducive to providing the required external technical assistance (from either domestic or international sources). Technical assistance inputs will be particularly important for new technologies such as wastewater treatment, sanitary landfill systems and industrial effluent control, which will be the increasing focus of all future initiatives.

c) As indicated previously in this report, the 3DT Project itself adopted a somewhat unique financing modality, whereby the major costs for the construction works came from the provincial budgets, with TA and other inputs through the AMC-managed Procurement Trust Fund. The AMC team were emphatic that this 'mixed-budget' financing mechanism was the best approach in their experience and that the results could not have been achieved using another financing modality. This enabled technical assistance to be closely integrated, as well as additional elements (such as the highly valued CD activities) to be incorporated into the project. Government ownership and commitment was enhanced through the substantial allocations from the province budget.

d) At the same time, reservations have been raised elsewhere about the effectiveness of matched 'loan financing' (for construction and equipment) and 'grant financing' (for technical assistance and capacity building) in some other projects, on the grounds that it can be difficult to achieve the required level of integration and synchronicity on the ground between these financing elements. These difficulties in synchronizing and coordinating inputs have also been the experience of the 3DT Project.

e) A key consideration is whether the objective is simply to support water supply and sanitation related investments – or a broader program of support which may, for instance, include elements of integrated urban infrastructure planning and small-scale Community development activities. Here again, irrespective of the funding modality, there are two critical issues that need to be addressed in any intervention.

f) Firstly, how to achieve the required level of inter-agency coordination that is required between the different infrastructure sub-sectors (water supply, roads, urban services etc.) as well as between the infrastructure and environment and social sectors (health and education)? The danger is that 'budget support' or 'programmatic support' type-modalities will not be able to address these coordination issues on the ground any more effectively than project mechanisms. Appropriate incentives for enhanced inter-agency coordination and cooperation need to be built into local government financing and operational systems to ensure this.

g) Secondly, there is a danger that under budget support type modalities the small-scale Community Development activities such as SCS and EHMA, which are essential to enhance the poverty focus as well as broader environmental and social impacts of such programs, would not receive sufficient priority or funding. The 3DT Project has shown that dedicated support is required to facilitate inter-agency coordination, to develop implementation mechanisms and procedures, and to build agency as well as community awareness and capacity to implement such activities.

h) Lastly, experience from the 3DT project has shown that sustainability of the water supply and waste disposal systems is constrained by the fact that current tariff rates are generally insufficient to fully cover operations and maintenance costs – such that subsidies from local government budgets continue to be required. These issues related to financial sustainability are not unique to this project, nor to this particular infrastructure sector. They are faced by all urban and rural WSS projects, and local government authorities, throughout the country. Moreover, they are indicative of broader financing constraints in the limited recurrent budget allocations to infrastructure related services across all sectors – irrigation, education, roads, water supply etc. Recent years have seen substantial investment in new public infrastructure, while adequate recurrent budgets for operations and maintenance are lacking across all these sectors.

i) It is possible to argue that there is a rationale to pursue a programmatic approach if possible (similar to Program 135 and the NTP on RWSS) whereby program funding is provided in parallel to necessary government policy reform. In this respect, strategies for sustainable operations of WSS facilities and services need to be devised in the broader context of improved financing strategies for public infrastructure services. As social and environmental goods – it is likely that some level of subsidized support will continue to be required for WSS in the foreseeable future; the key question lies in the appropriate balance between 'investment' and 'recurrent' budgets, and between a socially acceptable level of increased tariffs and increased public financing to ensure sustainability. As such, these issues need to be addressed at the highest policy level.

4.3 Conclusions – Steps to Enhance Sustainability

The ICR Team recommends that the following matters are in need of further discussion between AusAID, the Province Peoples Committees and other relevant parties to help ensure successful completion of the project and to promote sustainability of the project outcomes.

- Firstly, measures that need to be taken at provincial level to accelerate payment adjustments to contractors and accelerate completion of the remaining construction works.
- Secondly, further action is needed with MOC and especially the PPC's to emphasize the need to adopt tariff and charging policies which allow full cost recovery for WSEC's and Public Works Departments. At the very least, provincial budget policies, whether by tariff/charge increases or guaranteed subsidies, should guarantee increased future operating budgets for water supply, drainage and solid waste collection and disposal to help ensure adequate levels of operations and maintenance.
- Thirdly, the potential need for continuing AMC and equipment supplier support in installation, commissioning and O&M training for those facilities which are not yet complete. The ICR Team recommends the project should proceed towards closure and handover as planned in 2008. At the same time, if resources are available, consideration should be given to extending the input of the AMC (within or out with the present contractual framework) to enable additional operational training to be given to the WSECs and Urban Services on operation of the drainage pumps, water treatment plants, including strategies for dealing with breakdowns and for solid waste landfill sites at the time of commissioning and initial putting into service. This is the most important step that can be taken to help ensure sustainability. It is likely this would necessitate further short-term inputs from the AMC in the period up to end of 2009.

x

Annex 1. Achievements / Effectiveness / Impact Matrix – Logframe Objectives

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 1 – BAC LIEU	**See Table 3.1-B for Performance Indicators**	
1.1	Plan, design, construct and commission an upgraded water supply system	Number and proportion of households in target areas receiving safe water 24 hours per day at design pressures throughout the service area at end of project. Percentage of water samples meeting GOV/WHO water quality guidelines at end of project.	Planning, surveys, investigations, design reports, detailed design, specifications and cost estimates completed. Bidding plan prepared and approved. Water treatment plant E&M equipment delivered. Water meters and distribution pipes and fittings delivered. Testing of source water quality carried out over 15 months (extended by 3 months). Borefield investigations completed, drilling of new bores completed Jan 05 with good yield and water quality, pump testing completed Apr 05. Hydrogeological report approved Oct 05. Bore houses completed, pump equipment ordered. Bores commissioned and connected 2007. Construction of fast track distribution works in 7 downtown streets completed May 03. 2,962 new household connections added since September 03, serving 14,800 people. Distribution pipelines 94% complete - 45.1km of 100-500mm pipes installed. Reticulation pipelines 93% complete – 46.7km of 63mm pipes installed. Rehabilitation of 8,000m3/d WTP 1 including new treated water pump station and reservoir commissioned in Jan 07 contributing to improved pressures in distribution system. New 12,000m3/d WTP2 commenced Jun 05 and partially commissioned Jan 08 augmenting water supply to town. Elevated tank under construction, 85% complete by Apr 08. Urban area water supply coverage improved from 32% in 2001 to 63% in Mar 08, now serving approx. 55,000 people who are benefiting from improved water supply service. **Overall completion of Water Supply construction 94%.**
1.2	Plan, design, construct and commission an improved drainage system	Length and proportion of upgraded drainage system operational in agreed service area at end of project. Length and proportion of upgraded drainage system constructed to the best available grades to assist self-cleansing at end of project.	Planning, design reports and detailed design and specifications for primary and secondary drainage completed. Bidding plan prepared and approved. Scope of drainage works considerably increased from PDD. Designed location of Tran Huynh covered canal realigned in Dec 04 at request of DOC. Secondary drainage realigned and redesigned late 2005 at request of DOC, to minimise R&C. Construction of 3 streets fast track secondary drainage work completed Mar 07. Construction of Tran Huynh flushing lake excavation completed Jun 07. Primary drainage construction commenced 2006, construction in progress on Tran Huynh Covered Canal (67%), Nguyen Thi Minh Khai Canal (67%), Cau Xang Canal (13%) and Ca Phuong Drain (38%). Secondary drainage construction in progress. **Overall completion of Drainage construction 56%. Continued delays due to R&C problems.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 1 – BAC LIEU	**See Table 3.1-B for Performance Indicators**	
1.3	Plan, design, construct and commission an improved wastewater system	Proportion of first stage wastewater works operational in agreed service area at end of project.	Location and design of public toilets completed with community consultations. 2 portable public toilets procured, installed and in use by community. 6 No. permanent public toilets constructed and in use Mar 05 (4 No.) and Feb 07 (2 No.). 1,373 septic tanks/toilets constructed to Mar 08 in poor households under SCS, and Septic Tank Management System introduced. Many more septic tanks built without SCS funding. Urban area septic tank coverage improved to 78% in Mar 08, now benefiting approx. 67,300 people. Vacuum pump-out truck delivered Oct 05 and in use. **Overall completion of Wastewater construction 100%.**
1.4	Plan, design, construct and commission an improved solid waste management system	Proportion of agreed service area with operational solid waste management systems as planned including treatment/burial at landfill at end of project. Proportion of solid waste collection bins used properly by community at end of project.	Planning, design reports, detailed design, specifications and cost estimates for landfill completed. EIA Report completed and approved May 05. Road and bridge access to Landfill site commenced under separate project in 2005, not yet complete. Procurement of solid waste push carts, track loader delivered and in use. Compactor trucks (2) delivered Aug 05 and in use. Landfill construction commenced Dec 06, urban waste cell put into operation Dec 07, remainder of works 95% complete awaiting commissioning, Apr 08. A medical waste incinerator was installed and commissioned at Bac Lieu Hospital in Oct 06. **Overall completion of Solid Waste Landfill construction 98%.**
1.5	Strengthen capability of Bac Lieu WSEC	Number of WSCs with (water business) revenue / expenses ratio greater than one at end of project. Number and proportion of customer complaints on technical issues and system failures at end of project. Proportion of unaccounted-for water losses at end of project.	ID Review of 2005 Program and Training Plan 2006 completed. KPIs being reported (Refer to Table 3.1-B & C and Six Monthly Reports). Draft KPI targets, analysis and reporting system developed and introduced. Business planning models for WS and Sanitation introduced and workshopped with good results. New water billing system implemented. Customer management system (QLKH) that includes customer interaction, with information agreed by all WSECs, being developed as a cooperative activity. Pilot area data being set up, system ready for roll-out by mid 2006. Household Census carried out to establish customer database for Customer Management System and Septic Tank Management System. NRW reduction program underway, with task force operational and equipment procured.
			Asset management plan preparation and works management system being implemented. **Non-technical ID program completed in Nov 06.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 1 – BAC LIEU	**See Table 3.1-B for Performance Indicators**	
1.6	Strengthen the role of women in WSS planning and implementation	Numbers and proportion of women participating actively in water and sanitation related institutions and community groups, particularly in leadership roles at end of project.	TWU continuing to manage SCS program successfully – program handed over to TWU May 2005. WU also running new water connection credit scheme. Women strongly involved in ongoing IEC program with 59% female participation. 56% of ongoing CD Training program participants are Women. 42% of ongoing Overall Training program participants are Women. 56% of EHMA Program participants are women. Additional training provided to WU, including computer for financial management; Strategy for problem solving; Community motivation techniques; Effective community meeting organization; Negotiation and mediation skills. **During implementation of Project Completion Survey in Mar 08, TWU staff demonstrate significant improvement of capacity and skills since start of Project.**
1.7	Promote inter-agency coordination	Investment Coordination Program presented to TPC/PPC by end of project.	Infrastructure Investment Coordination concepts developed into Toolkit and workshopped with central and provincial level working groups before 60 copies of Final Toolkit circulated to planning agencies, as ideas and suggestions for improving interagency Coordination, in March 2004. Meeting with GOV, Donor agencies, AusAID and VWSA in Nov 2004 in Hanoi indicated intention of GOV to take IICP Toolkit further and trial in some small towns.
1.8	Demonstrate action planning in priority areas in Bac Lieu	Urban rehabilitation programs for priority areas presented to TPC/PPC by end of project.	Urban Rehabilitation Plans for Wards 2 and 5 completed, workshopped with Town urban planning agencies, and priority sub-projects incorporated into infrastructure designs.
1.9	Increase awareness of water, environmental sanitation and health linkages	Changes in sanitation and EHI practices over project life in community and schools by end of project.	Wards & communes IEC Core Groups and Volunteer Networks established, trained and operating with the involving of ward/commune, WU, YU, Health Post. IEC Review of 2005 completed. Plan for 2006 with focus on IEC in schools and linkage with SSP completed. Approx 85% of community informed about Project through IEC activities and materials such as leaflets, posters, audio and video tapes, billboards. Formal IEC Activities involve more than 34,000 people, of whom 55% are women. Children deworming and Women's health checking and disease treatment programs supported. Teachers trained in curriculum development, participatory teaching approach for health education, and in Child-to-Child approach. School Pioneer team leaders trained in out-of-class activities. Health Promoting Schools (HPS) program introduced in pilot schools. **3DT IEC program completed mid 2006 and handed over to TPC for continuation.** **TPC continuing to implement IEC program in 2007-08 with IEC CG under TPC funding.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 1 – BAC LIEU	**See Table 3.1-B for Performance Indicators**	
1.10	Facilitate improved neighbourhood and school environments	Number of ongoing neighbourhood and school environmental programs funded by TPC and community after project completed.	EHMA program operating successfully with 174 EHMAs completed benefiting 4,400 HH of which 32% classified by TPC as poor, and 12,500 school children and teachers. 14,800m^2 of lane paving and 3.1km of drainage constructed with community assistance. Additional fund of A$15,000 allocated from Project and matched by TPC to continue program at request of CAC. Construction of school sanitation facilities completed in 14 schools under SSP, benefiting 6,600 children and teachers, 74% being women. WSEC agreed to provide schools with free water connections.
		Proportion of poor families using sanitation credit facility at end of project.	1,373 septic tanks/toilets constructed under SCS. Additional funds allocated by PPC to meet greater demand. New water connection credit scheme established in 2006, run by TWU in cooperation with WSEC. Strategy for very poor borrowers and policies for defaulters established by CAC and CFMB and implemented. **3DT community infrastructure programs handed over to TPC for continued implementation in Nov 06.**
1.11	Support development and implementation of resettlement action plans (RAP)	Resettlement issues do not delay construction Proportion of resettled households satisfied with process at end of project.	Provision of assistance and advice to PMU Task Force and Resettlement Committee continuing. Preparation of 7 C-RAPs completed and approved and resettlement sites available since Oct 05. Approx. 95% of RAP implementation completed by Apr 08. Independent Monitoring Agency has completed monitoring and evaluation of 7 C-RAPs.

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 2 – HA TIEN	**See Table 3.1-B for Performance Indicators**	
2.1	Plan, design, construct and commission an upgraded water supply system	Number and proportion of households in target areas receiving safe water 24 hours per day at design pressures throughout the service area at end of project. Percentage of water samples meeting GOV/WHO water quality guidelines at end of project.	Planning, surveys, investigations, design reports, detailed design, specifications and cost estimates completed. Bidding plan prepared and approved. E&M equipment, distribution pipes and water meters delivered. E&M equipment for WTP ordered. Testing of source water quality carried out over 15 months (extended by 3 months). Construction of fast track water supply works for raw water pump station and 400mm PE transmission pipeline to town completed. Raw water available in Ha Tien town in Jan 04 benefiting 28,000 people in urban area and eliminating annual drought situation. Construction of 250mm uPVC pumping main to Hon Heo and Ba Hon completed and commissioned in Oct 04. 3,192 new household connections added since September 03, serving 16,000 people. Transmission and distribution pipelines 100% complete – approx 69km of 80-400mm pipes installed. Reticulation pipelines 100% complete – approx. 58km of 63mm pipes installed. New 8,000m3/d WTP commenced Nov 05 and commissioned Sep 07 supplying potable water to town. Urban area water supply coverage improved from 18% in 2001 to 71% in Mar 08, now serving approx. 23,500 people who are benefiting from improved water supply service. **Overall completion of Water Supply construction 100%.**
2.2	Plan, design, construct and commission priority drainage requirements	Length and proportion of upgraded drainage system operational in agreed service area at end of project.	TPC support AMC's proposals for drainage design concepts. Implementation of work cancelled at request of TPC and PMU during 2004, and fund transferred to Water Supply component.
2.3	Plan, design, construct and commission an improved wastewater system	Proportion of first stage wastewater works operational in agreed service area at end of project.	Location and design of public toilets completed with community consultations. 2 portable public toilets procured, installed and in use by community. 4 No. permanent public toilets constructed and in use Aug 06. 1,202 septic tanks/toilets constructed to Mar 08 in poor households under SCS, and Septic Tank Management System introduced. Many more septic tanks built without SCS funding. Urban area septic tank coverage improved to 68% in Mar 08, now benefiting approx. 22,500 people. Vacuum pump-out truck delivered Nov 04 and in use. **Overall completion of Wastewater construction 100%.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 2 – HA TIEN	**See Table 3.1-B for Performance Indicators**	
2.4	Plan, design, construct and commission an improved solid waste management system	Proportion of agreed service area with operational solid waste management systems as planned including treatment/burial at landfill at end of project. Proportion of solid waste collection bins used properly by community at end of project.	Planning, surveys, investigations, design reports, EIA report, detailed design, specifications and cost estimates completed. Work on PMU contract to upgrade 3 bridges on access road to LF site completed. Compactor trucks (2) and waste storage bins procured and in use in Ha Tien, Feb 04. Existing compactor trucks repaired and put back into use Oct 04. Track loader delivered and in use. Landfill construction commenced Dec 05, 80% complete by Apr 08. A medical waste incinerator was installed and commissioned at the site of the new Ha Tien Hospital in Dec 06. **Overall completion of Solid Waste 76%.**
2.5	Strengthen capability of Kien Giang WSC	Number of WSCs with (water business) revenue / expenses ratio greater than one at end of project. Number and proportion of customer complaints on technical issues and system failures at end of project. Proportion of unaccounted-for water losses at end of project.	ID Review of 2005 Program and Training Plan 2006 completed. KPIs being reported (Refer to Table 3.1-B & C and Six Monthly Reports). Draft KPI targets, analysis and reporting system developed and introduced. Business planning models for WS and Sanitation introduced and workshopped with good results. New water billing system implemented. Customer management system (QLKH) that includes customer interaction, with information agreed by all WSECs, being developed as a cooperative activity. Pilot area data being set up, system ready for roll-out by mid 2006. Household Census carried out to establish customer database for Customer Management System. NRW reduction program underway, with task force operational and equipment procured. Asset management plan preparation and works management system being implemented. **Non-technical ID program completed in Nov 06.**
2.6	Strengthen the capability of Ha Tien Public Works Management Unit.	Number and proportion of customer complaints on technical issues and system failures at end of project at end of project.	As for Ref. 2.5 above except NRW. Business planning model for Sanitation introduced and workshopped with good results. Septic Tank Management System introduced. **Non-technical ID program completed in Nov 06.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 2 – HA TIEN	**See Table 3.1-B for Performance Indicators**	
2.7	Strengthen the role of women in WSS planning and implementation	Numbers and proportion of women participating actively in water and sanitation related institutions and community groups, particularly in leadership roles at end of project.	TWU continuing to manage SCS program successfully – program handed over to TWU May 2005. WU also initiated a new water connection credit scheme. Women strongly involved in ongoing IEC program with 64% female participation. 51% of ongoing CD Training program participants are Women. 36% of ongoing Overall Training program participants are Women. Additional training provided to TWU, including computer for financial management; Strategy for problem solving; Community motivation techniques; Effective community meeting organization; Negotiation and mediation skills. **During implementation of Project Completion Survey in Mar 08, TWU staff demonstrate significant improvement of capacity and skills since start of Project.**
2.8	Promote inter-agency coordination	Investment Coordination Program presented to TPC/PPC by end of project.	Infrastructure Investment Coordination concepts developed into Toolkit and workshopped with central and provincial level working groups before 60 copies of Final Toolkit circulated to planning agencies, as ideas and suggestions for improving interagency Coordination, in March 2004. Meeting with GOV, Donor agencies, AusAID and VWSA in Nov 2004 in Hanoi indicated intention of GOV to take IICP Toolkit further and trial in some small towns.
2.9	Increase awareness of water, environmental sanitation and health linkages	Changes in sanitation and EHI practices over project life in community and schools by end of project.	Wards & communes IEC Core Groups and Volunteer Networks established, trained and operating with the involving of ward/commune, WU, YU, Health Post. IEC Review of 2005 completed. Plan for 2006 with focus on IEC in schools and linkage with SSP in progress. Approx 85% of community informed about Project through IEC activities and materials such as leaflets, posters, audio and video tapes, billboards. Formal IEC Activities involve more than 9,800 people of whom 59% are women. Deworming program for children and Women's health checking and disease treatment supported. Teachers trained in curriculum development, participatory teaching approach for health education, and in Child-to-Child approach. School Pioneer team leaders trained in out-of-class activities. Health Promoting Schools (HPS) program introduced in pilot schools. **3DT IEC program completed mid 2006 and handed over to TPC for continuation.** **TPC continuing to implement IEC program in 2007-08 with IEC CG under TPC funding.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 2 – HA TIEN	**See Table 3.1-B for Performance Indicators**	
2.10	Facilitate improved neighbourhood and school environments	Number of ongoing neighbourhood and school environmental programs funded by TPC and community after project completed. Proportion of poor families using sanitation credit facility at end of project.	EHMA program completed successfully with 131 EHMAs benefiting 674 HH of which 23% classified by TPC as poor, and 7,700 school children and teachers. 8,900m^2 of lane paving and 820m of drainage constructed with community assistance. Construction of school sanitation facilities completed in 6 schools under SSP, benefiting 2,500 children and teachers, 75% being women. WSEC agreed to provide schools with free water connections. 1,202 septic tanks/toilets constructed under SCS. Additional A$15,000 allocated by Project and matched by TPC to meet greater demand. New water connection credit scheme established and funded by TWU. Strategy for very poor borrowers and policies for defaulters established by CAC and CFMB and implemented. **3DT community infrastructure programs handed over to TPC for continued implementation in Nov 06.**
2.11	Support development and implementation of resettlement action plans (RAP)	Resettlement issues do not delay construction Proportion of resettled households satisfied with process at end of project.	Provision of assistance and advice to PMU Task Force and Resettlement Committee provided. Preparation, approval and implementation of RAPs completed.

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 3 – SA DEC	**See Table 3.1-B for Performance Indicators**	
3.1	Plan, design, construct and commission an upgraded water supply system	Number and proportion of households in target areas receiving safe water 24 hours per day at design pressures throughout the service area at end of project. Percentage of water samples meeting GOV/WHO water quality guidelines at end of project.	Planning, surveys, investigations, design reports, detailed design, specifications and cost estimates completed. Bidding plan prepared and approved. E&M equipment for fast track works, distribution materials and water meters delivered. E&M equipment for WTP ordered Dec 05. Testing of source water quality carried out over 15 months (extended by 3 months). Existing pump station fast track rehabilitation completed Dec 04. Fast track bore completed and commissioned in Feb 05 with good yield and water quality, bore house completed Mar 06. Fast track works have made substantial improvement to water system reliability and flow, providing 24 hr supply for first time. 4,758 new household connections added since September 03, serving 23,800 people. Distribution pipelines 100% complete – 54.1km of 100-400mm pipes installed. Reticulation pipelines 100% complete – 47.4km of 63mm pipes installed. New treated water pump station and reservoir at WTP 2 started Dec 05 and commissioned in May 07. New 10,000m3/d WTP2 commenced Oct 06, civil works completed Jan 08, E&M installation completed Apr 08, ready for commissioning in May 08, 95% completed. Elevated tank under construction, 85% complete by Apr 08. Raw water intake delayed by R&C and by foundation failure. Redesign for direct river intake completed Apr 08. Temporary intake installed Apr 08 for WTP commissioning. Urban area water supply coverage improved from 38% in 2001 to 87% in Mar 08, now serving approx. 62,200 people who are benefiting from improved water supply service. **Overall completion of Water Supply construction 86%.**
3.2	Plan, design, construct and commission an improved drainage system	Length and proportion of upgraded drainage system operational in agreed service area at end of project.	Planning, surveys, investigations, design reports, detailed design, specifications and cost estimates completed. Drainage redesigned at request of TPC. Bidding plan prepared and approved. R&C approved June 06. Construction of East and West Drainage system commenced Oct 06, progress very slow. **Overall completion of Drainage construction 57%.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 3 – SA DEC	**See Table 3.1-B for Performance Indicators**	
3.3	Plan, design, construct and commission an improved wastewater system	Proportion of first stage wastewater works operational in agreed service area at end of project.	Location and design of public toilets completed with community consultations. 2 portable public toilets procured, installed and in use by community. 5 No. permanent public toilets constructed and in use by Aug 07. 1,778 septic tanks/toilets and 131 biogas tanks constructed to Mar 08 in poor households under SCS and BCS, and Septic Tank Management System introduced. Many more septic tanks built without SCS funding. Urban area septic tank coverage improved to 77% in Mar 08, now benefiting approx. 55,200 people. Vacuum pump-out truck delivered Jun 04 and in use. **Overall completion of Wastewater construction 100%.**
3.4	Plan, design, construct and commission an improved solid waste management system	Proportion of agreed service area with operational solid waste management systems as planned including treatment/burial at landfill at end of project. Proportion of solid waste collection bins used properly by community at end of project.	Planning, design reports, detailed design, specifications and cost estimates for landfill completed. EIA Report completed and approved Apr 05. Compactor trucks (4) and waste storage bins procured Nov 03 and in effective use. Track loader delivered and in use. Landfill construction commenced Aug 06, progress slow. **Overall completion of Solid Waste Landfill construction 82%.**
3.5	Strengthen capability of Dong Thap WSEC	Number of WSCs with (water business) revenue / expenses ratio greater than one at end of project. Number and proportion of customer complaints on technical issues and system failures at end of project. Proportion of unaccounted-for water losses at end of project.	ID Review of 2005 Program and Training Plan 2006 completed. KPIs being reported (Refer to Table 3.1-B & C and Six Monthly Reports). Draft KPI targets, analysis and reporting system developed and introduced. Business planning models for WS and Sanitation introduced and workshopped with good results. DTWSEC have initiated Strategic Planning task force. New water billing system implemented. Customer management system (QLKH) that includes customer interaction, with information agreed by all WSECs, being developed as a cooperative activity. Pilot area data being set up, system ready for roll-out by mid 2006. Dong Thap announced free water connection scheme in early 2006. Household Census carried out to establish customer database for Customer Management System and Septic Tank Management System. NRW reduction program underway, with task force operational and equipment procured. Asset management plan preparation and works management system being implemented. **Non-technical ID program completed in Nov 06.**

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 3 – SA DEC	**See Table 3.1-B for Performance Indicators**	
3.7	Strengthen the role of women in WSS planning and implementation	Numbers and proportion of women participating actively in water and sanitation related institutions and community groups, particularly in leadership roles at end of project.	WU continuing to manage SCS program successfully – program handed over to WU Apr 2005. WU also to run a new water connection credit scheme in cooperation with WSEC. Women strongly involved in IEC program with 54% female participation. 59% of CD Training program participants are Women. 42% of Overall Training program participants are Women. Additional training provided to WU, including computer for financial management; Strategy for problem solving; Community motivation techniques; Effective community meeting organization; Negotiation and mediation skills. **During implementation of Project Completion Survey in Mar 08, TWU staff demonstrate significant improvement of capacity and skills since start of Project.**
3.8	Promote inter-agency coordination	Investment Coordination Program presented to TPC/PPC by end of project.	Infrastructure Investment Coordination concepts developed into Toolkit and workshopped with central and provincial level working groups before 60 copies of Final Toolkit circulated to planning agencies, as ideas and suggestions for improving interagency Coordination, in March 2004. Meeting with GOV, Donor agencies, AusAID and VWSA in Nov 2004 in Hanoi indicated intention of GOV to take IICP Toolkit further and trial in some small towns.
3.9	Increase awareness of water, environmental sanitation and health linkages	Changes in sanitation and EHI practices over project life in community and schools by end of project.	Wards & communes IEC Core Groups and Volunteer Networks established, trained and operating with the involving of ward/commune, WU, YU, Health Post. IEC Review of 2005 completed. Plan for 2006 with focus on IEC in schools and linkage with SSP in progress. Approx 85% of community informed about Project through IEC activities and materials such as leaflets, posters, audio and video tapes. Formal IEC Activities involve more than 27,000 people, of whom 55% are women. Deworming program for children and Women's health checking and disease treatment supported. Teachers trained in curriculum development, participatory teaching approach for health education, and in Child-to-Child approach. School Pioneer team leaders trained in out-of-class activities. Health Promoting Schools (HPS) program introduced in pilot schools. **3DT IEC program completed mid 2006 and handed over to TPC for continuation.** **TPC continuing to implement IEC program in 2007-08 with IEC CG under TPC funding.**
3.10	Facilitate improved neighbourhood and school environments	Number of ongoing neighbourhood and school environmental programs funded by TPC and community after project completed. Proportion of poor families using sanitation credit facility at end of project.	EHMA program completed successfully with 148 EHMAs completed benefiting 1,942 HH of which 35% classified by TPC as poor, and 9,200 children and teachers. 17,000m^2 of lane paving and 2.1km of drainage constructed with community assistance. Construction of school sanitation facilities completed in 10 schools under SSP, benefiting 3,000 children and 164 teachers, 73% being women. WSEC agreed to provide schools with free water connections.

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 3 – SA DEC	**See Table 3.1-B for Performance Indicators**	
			1,778 septic tanks/toilets and 131 biogas tanks constructed under SCS and BCS. Additional A$15,000 allocated to SCS by Project and matched by TPC to meet greater demand. Strategy for very poor borrowers and policies for defaulters established by CAC and CFMB and implemented. Septic tanks being provided to very poor HH through SCS loan interest. WSC has provided 3 poor SCS borrowers with free water connections. New water connection credit scheme established, run by TWU in cooperation with WSEC. **3DT community infrastructure programs handed over to TPC for continued implementation in Nov 06.**
3.11	Support development and implementation of resettlement action plans (RAP)	Resettlement issues do not delay construction Proportion of resettled households satisfied with process at end of project.	Provision of assistance and advice to PMU Task Force and Resettlement Committee continuing. Preparation, approval and implementation of RAPs completed. Independent Monitoring Agency has completed monitoring and evaluation of all C-RAPs.

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 4 PROJECT MANAGMEMENT		
4.1	Mobilise project resources and establish quality assurance systems and procedures	Project team working on site in partnership with PMUs QA systems and procedures established and disseminated Project design updated to AusAID requirements on schedule	AMC/PMU Project offices continue operations in HCMC, Bac Lieu and Sa Dec. Ha Tien office closed Aug 07. Financial resources operational and VAT refunds being obtained quarterly for local procurement. Project management systems and procedures operational. Roles, responsibilities, QA procedures and work programs operational. M&E Handbook, Risk Management Plan and Environmental Management Plans operational. Project Officer training ongoing through specific courses and on the job training. Revision of SA signed in Aug 06.
4.2	Review GOV Feasibility Study Reports for Bac Lieu, Ha Tien and Sa Dec WSS improvement works and prepare a combined Project Implementation Document (PID)	HH surveys used to review town FSRs FSR review workshops held, all stakeholders present and feed back obtained Draft schedules completed and submitted on program and to AusAID requirements Combined project PID workshop held with all stakeholders PID completed in draft and final forms to requirements.	Overall project schedules and costs prepared and updated in Six Monthly Reports and Annual Plans.

WORKING PAPER 6.3 ACHIEVEMENTS/EFFECTIVENESS/IMPACT MATRIX – LOGFRAME OBJECTIVES			
LFM Ref	**Objective**	**Verifiable Indicators**	**Achievements/Effectiveness/Impact to 30 April 2008**
	COMPONENT 4 PROJECT MANAGMEMENT		
4.3	Establish and operate effective project management system	Management meetings (PMU, PIC, PSC and PCC) held to schedule Project management and communication systems operating Project management training for PMUs carried out. PMUs adopt improved methods QRs and 6MRs submitted to AMC & GOV on time. PCR prepared in accordance with AusGUIDE and on time	PCC, PSCs and PMUs operating and meetings being held regularly. PCC Workshops/meetings held in May and November each year. Project management and communication systems operational with increased management skills. Monitoring and Evaluation systems upgraded in early 2004 and fully operational. Key Performance Indicators being reported and quality/reliability of data improving. Liaison with other sector projects/donors/VWSA ongoing. 3DT Project Website launched in March 2003 and operational. PMU staff training continuing – ref. Training Plans. Site safety equipment procured and in use. 6MR and SMT Reports prepared and submitted on time. The following AusAID TAG missions have been carried out: TAG 1 Engineering, May/June 2002. TAG 2 Resettlement and Compensation, Nov 2002. TAG 3 Engineering and ID, March 2003. TAG 4 Resettlement and Compensation, Aug 2003. TAG 5 Engineering, ID and CD, Nov 2003. TAG 6 Resettlement and Compensation, Sept 2004. TAG 7 Engineering, ID and CD, Dec 2004. TAG 8 Engineering, May 2005. TAG 9 Resettlement and Compensation, Jun 2005. TAG 10 Engineering, ID and CD, May 2006. TAG 11 Engineering, Nov 2006. TAG 12 Engineering, Aug 2007. Project Completion Survey carried out Feb/Mar 08 in 3 towns. Draft Project Completion Report to be prepared and issued by 30 May 08, incorporating BCA and Project Completion Survey Report.

x

Annex 2. Achievements Matrix – Project Goal and Key Result Areas

Project Goal	Achievements to April 30, 2008
To improve the welfare of residents of Bac Lieu, Ha Tien and Sa Dec urban wards and communes by rehabilitating and extending water supply, drainage, wastewater and solid waste management facilities and services and to develop the capacity of local institutions and community groups to manage these systems on a sustainable basis.	• Approximately 71,000 residents in the 3 towns (between 30% and 40% of the urban populations) have improved environmental health knowledge through the Project's IEC programs, which are being continued since Nov 06 by the 3 TPCs. • Approximately 99,000 residents in the 3 towns (between 45% and 60% of the urban populations) are direct beneficiaries of the Project's community infrastructure – SCS, BCS, SSP and EHMA programs. The SCS is continuing to be operated by the 3 TWUs since 2004. • The completion survey (CS) showed a 70-80 % reduction in reported water related health problems in the project towns. • > 90 % of CS respondents reported that their local areas around their houses were cleaner than six years ago. • The capacity of local institutions and community groups to manage the systems on a sustainable basis is continuing to improve with demonstrated commitment to project approaches.

Key Result Areas	Performance or Impact Indicator	Achievements to April 30, 2008
Improving public health through better access to clean water supplies and environmental sanitation services	• Number and proportion of sample population showing improved water and sanitation health indicators due to changes in water availability, usage, sanitation improvements and EH practices at end of project.	• 141,000 residents in the 3 towns with improved water supply service through new and upgraded systems. • The CS reported a 90 % reduction in gunaecological problems across the three project towns. A 50% reduction in incidence of women's gynaecological diseases reported in Bac Lieu between 2003 and 2006 indicating better sanitation and improved hygiene behaviour. • 75% reduction in reported Diarrhoea and eye / skin related problems. • 95 % reduction in reported internal worm problems across the three towns. Incidence of worm infections in Bac Lieu schoolchildren reduced from 17% in 2003 to 8% in 2006. • CS reported 15-25 % of reporting households have implemented improved water and sanitation practices. These results are supported by participation rates and reported practices from other surveys.
	• Number and proportion of households with functional septic tanks at end of project.	• Sanitation Credit Scheme (SCS) continuing operation in 3 towns through TWUs with nearly 4,400 septic tanks/toilets and 131 biogas tanks already constructed by poor[25] households (See Table 3.1-B) with 22,400 direct beneficiaries. Many more septic tanks being constructed without SCS loans. • All sanitation credit loans directed through women. Bac Lieu has extended funding for 3 years.

[25] Poor is defined as household included in MOLISA/DOLISA Poor Book or as identified by neighbourhood groups.

Key Result Areas	Performance or Impact Indicator	Achievements to April 30, 2008
		• Proportion of HH with septic tanks in urban wards increased to approx. 78% in Bac Lieu, 68% in Ha Tien, and 77% in Sa Dec, benefiting 145,000 people. • Local environmental improvements through better on-site treatment of household and piggery wastewater with increased number of septic and biogas tanks.
		• 40,700m^2 of neighbourhood pathways and 6km of neighbourhood drains constructed under EHMA program in 3 towns benefiting 7,000 households and 29,400 school children and teachers. Total of 453 EHMAs constructed. (See Table 3.1-B) • New drainage and sewerage design concepts introduced to the 3 PMUs/Towns and drainage designs prepared for Bac Lieu and Sa Dec and under construction. Some drainage lines in Bac Lieu already put into service, benefiting local areas. • School environment improvements through SSP completed in three towns, benefiting 30 schools and more than 12,300 children and teachers.
	• Volume (and quality) of WSS related pollutants discharged to the local environment at end of project.	• Two portable public toilets operational in each town, plus 6 permanent public toilets completed in Bac Lieu, 5 in Sa Dec and 4 in Ha Tien. • New sanitary solid waste landfill facilities under construction in all 3 towns. Bac Lieu urban waste cell put into operation in Dec 07. • New landfill facilities will have urban waste cells, hazardous waste cells and leachate treatment systems, operational when new facilities operational mid 2008. • Solid waste collection systems and service areas improved with new bins, carts and compactor trucks provided by Project. • Septic tank management systems introduced in each town with use of new vacuum pump-out trucks provided by Project. • New medical waste incinerators installed and Bac Lieu and Ha Tien hospitals.
Improving water supply services and environmental health services to town residents	• Number and proportion of total households (including poor households) in service area with access to and using the upgraded water supply at end of project.	• Bac Lieu connections coverage between 2001 and 2008 increased from 32% to 63% of urban population (target 90% for each town). • Ha Tien connections coverage between 2001 and 2008 increased from 18% to 71%. • Sa Dec connections coverage between 2001 and 2008 increased from 38% to 87%. • High level of demand to connect to water supply system indicates people are aware of the benefits of clean piped water supply.
	• Percentage of monthly water samples meeting GOV/WHO water quality guidelines at end of project.	• Laboratory equipment and training provided as new water treatment plants are put into operation. Water quality testing and monitoring systems are being introduced.
Improving community inputs to WSS/EH development and management/O&M	• Linkages between communities, CAC, WSC, PWC and TPC in place to facilitate ongoing community input into effective EH improvement activities.	• CACs and IEC Core Groups reported to be still operational in 3 towns with involvement of TPC, WSC, PWC, Community Liaison Officers, Volunteers and community. • Community groups establishing neighbourhood solid waste collection systems. • During project, EHMA beneficiaries and GOV agencies each provided about 20% of cost of

Key Result Areas	Performance or Impact Indicator	Achievements to April 30, 2008
	• Proportion of community and TPC funding to EHI and IEC activities during and after end of project.	EHMA activities with GOV providing balance of A$1 million budget. Cost per beneficiary approx A$15 per person. • Some of Project's CD programs are being continued by TPCs and local agencies with local funding since Nov 2006. PPCs, TPCs and WSCs have committed funds for CD programs and some may continue.
Improving WSS/EH services to poor and vulnerable groups	• Number and proportion of vulnerable groups (women, women-headed HHs, minority ethnic groups and poor) benefiting from improved WSS and environmental health improvement activities at end of project.	• Focus of CD programs on vulnerable groups and households since 2004. ~35% of EHMA households defined as poor. 7,000 HHs representing 35,000 people benefit from EHMA activities, plus 29,000 schoolchildren and teachers from 155 EHMAs in schools. • CS shows that project water and sanitation activites have led to similar (or better) improvements for the lowest income group (quintile) compared to the wealthiest group. • Water connection credit schemes introduced in 3 towns and still operating. Free or subsidised water connection scheme introduced by DT WSEC. • Some at-risk communities e.g. Khmer in Ha Tien have undergone major changes in hygiene practices, adopting toilets, hand washing and clean houses.
	• Number and proportion of poor (as defined by community groups) households in service area with access to and using the upgraded water supply at end of project.	• Poor groups and households targeted since 2004. Database of poor households improved. • WSCs understand need for affordable tariffs and connection fees/free connections for the poor. WU and WSCs have introduced targeted free water connections (Bac Lieu) and credit schemes for poor people to connect to upgraded water supplies.
	• Number and proportion of project constructed public toilets in use at end of Project with secure O&M funding.	• 2 Portable public toilets operational in all three towns. • 6 Permanent public toilets completed in Bac Lieu plus 4 in Ha Tien and 5 in Sa Dec.
Improving WSS company capabilities	• Number of WSCs with (water business) revenue/expenses ratio greater than one at end of project. • Number and proportion of customer complaints on technical issues and system failures at end of project. • Number of WSCs with reduced proportion of unaccounted-for water losses at end of project.	• Greater awareness of customer service has been the most successful output of the non-technical ID program, as demonstrated by the replication of customer skills training by the WSCs themselves, customer development conferences and household surveys that strengthen the awareness of customer issues. • The CS reported high satisfaction rates (95%) with water company services, particularly in arranging connections and in managing meter reading and billing. Lower satisfaction with water quality (80 – 85 %) but >90 % in Ha Tien where treatment plant is operating and providing reliable all year around water supply. • The largest relative change in current and projected impact sof the ID activities estimated by respondents to the ID completion survey carried out by the WSCs in September 2006 was in the customer service and community interaction section. • Successive TAG reviews have commented on the increasing customer awareness in all WSCs. • The ID Annual Reviews have also highlighted the improvement in customer focus in the WSCs., and the ID completion survey carried out by the WSCs in September 2006 shows customer focus as having the greatest change during the Project. • Significant increase in the awareness of key company staff and managers of the need for

Key Result Areas	Performance or Impact Indicator	Achievements to April 30, 2008
		change. Examples include: o the setting up of three task forces in Dong Thap WSEC to prepare 5-year plans for company development. o Increased water tariffs in BL, reduced tariffs in HT • Coupled with various business systems, there is a much improved awareness and use of information systems to support improved decision making. • Monthly KPIs on all WSEC operations being collected and monitored, and summarised in the 6-Monthly Reports. (See also Table 3.1-B). • Benefits and improvements gradually being felt as new facilities and infrastructure are completed and operating in early – mid 2008. • WSC starting in limited way to monitor numbers and types of customer complaints (S). • NRW reduction program ongoing in all towns with task forces operational, equipment and fittings provided, and NRW metering zones being established. Benefits in terms of reduced NRW will gradually become evident especially in Sa Dec as new and replacement pipelines are connected to the system.
Improving Integrated WSS-related urban planning	• Number of wards with approved urban rehabilitation plans for integrated urban development at end of project.	• Rehabilitation plans for Wards 2 & 5 in Bac Lieu completed and incorporated into tertiary drainage planning and design. • Procedures demonstrated to town urban planning group. • Infrastructure Investment Coordination concepts developed into Toolkit and workshopped with central and provincial level working groups. 60 copies of Final Toolkit circulated to planning agencies, as ideas and suggestions for improving interagency Coordination, in March 2004. • Meeting with GOV, Donor agencies, AusAID and VWSA in Nov 2004 in Hanoi indicated intention of GOV to take IICP Toolkit further and trial in some small towns.
Notes: 1. This table is based on Tables 2 and 3 (Key Impact and Performance Indicators, and Summary of Indicators) of the M&E Handbook (Rev 2, June 2003). 2. Some Performance/Impact Indicators rely on the completion of infrastructure and can therefore not be realised until nearer the end of the Project. 3. The Achievements column reports broad achievements in the financial year related to the KRAs. For achievements related to specific Logframe objectives refer to App I. See WP 6.1 for 3DT Preliminary Key Performance Indicators to March 2008		

x

Annex 3. Final Cost Summary Tables

Annual Procurement Budget									Budget
	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	Total	
BAC LIEU									
Water Supply	389,529	515,713	2,060,346	1,705,983	345,360	197,075	134,235	5,348,241	5,157,000
Drainage	-	440,499	1,310,394	639,376	797,624	408,320	633,823	4,230,036	4,387,000
Solid Waste	-	-	2,873	718,881	30,641	132,434	39,369	924,198	995,000
Wastewater	-	-	29,722	8,974	1,418	7,194	-	47,308	45,000
Office Equipment		11,247	2,238	8,966	(534)	130	-	22,047	48,000
O&M	378	118,094	9,164	111,921	16,897	3,499	35,000	294,953	490,000
Construction,survey test equip	223	70,610	1,488	2,217	-	-	-	74,538	72,000
Community Activities		6,418	5,001	2,322	23,345	49	-	37,135	45,000
Sanitation Activities		109,007	14,945		5,012	-	-	128,964	129,000
Total BAC LIEU	**390,130**	**1,271,588**	**3,436,171**	**3,198,640**	**1,219,763**	**748,701**	**842,427**	**11,107,420**	**11,368,000**
HA TIEN									
Water Supply	1,126,182	1,407,114	168,719	3,148,788	21,830	121,682	57,742	6,052,057	5,908,000
Drainage	-	-	-	-	-	-	-	-	0
Solid Waste	-	143,154	26,002	403,940	36,448	149,158		758,702	938,000
Wastewater	-	-	29,873	-	27,449	15,500	-	72,822	50,000
Office Equipment	13,071	6,252	2,160	1,729	414	49		23,675	43,000
O&M	-	118,094	8,669	189,475	9,190	10,141	27,000	362,569	303,000
Construction,survey test equip	160	70,610	1,488	20	-	200	-	72,478	73,000
Community Activities	-	1,980	4,314	2,765	15,775	1,186	-	26,020	29,000
Sanitation Activities		56,538	14,329	-	24,620	6,772	-	102,259	96,000
Total HA TIEN	**1,139,413**	**1,803,742**	**255,554**	**3,746,717**	**135,726**	**304,688**	**84,742**	**7,470,582**	**7,440,000**
SA DEC									
Water Supply	-	789,560	1,496,451	826,119	1,854,738	98,926	121,715	5,187,509	4,746,000
Drainage	-	-	-	164,381	234,473	38,155	168,611	605,620	606,000
Solid Waste	-	251,552	16,382	347,464	25,892	120,480	16,000	777,770	784,000
Wastewater	-	-	29,389	-	-	17,832		47,221	50,000
Office Equipment	-	1,702	5,144	11,173	1,208	-		19,227	49,000
O&M	-	118,206	14,312	105,221	24,210	3,349	20,000	285,298	440,000
Construction,survey test equip	160	70,610	1,488	2,680	-	-	-	74,938	74,000
Community Activities	1,899	1,540	7,000	2,755	12,909	-	-	26,103	44,500
Sanitation Activities	-	85,568	63,947	-	5,012	-	-	154,527	154,000
Total SA DEC	**2,059**	**1,318,738**	**1,634,113**	**1,459,793**	**2,158,442**	**278,742**	**326,326**	**7,178,213**	**6,947,500**
AMC									
Vehicles	-	259,417	-	-	-	-	10,000	269,417	270,000
Safety	-	260	-	17	1,222	-	-	1,499	3,673
Theodolite	9,500.00	-	-	-	-	-	-	9,500	9,500
Total AMC	**9,500.00**	**259,677**	**0**	**17**	**1,222**	**0**	**10,000**	**280,416**	**283,173**
MB Office Equipment	-	3,596	-	6,681	-	-	-	10,277	29,000
Contingency	-	-	-	36,397	-	-	95,368	131,765	111,000
Total MB + Contingency	**-**	**3,596**	**-**	**43,078**	**-**	**-**	**95,368**	**46,674**	**140,000**
Grand Total	**1,541,102**	**4,657,341**	**5,325,838**	**8,448,245**	**3,515,153**	**1,332,131**	**1,358,863**	**26,178,673**	**26,178,673**

BAC LIEU

Annual Construction Budget **All Costs in A$**

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006./2007	2007/2008	2008/2009	Total
BAC LIEU									
Water Supply									
Construction incl. Customs and R&C	-	3,000	50,000	417,000	1,179,000	775,000	900,000	-	3,324,000
									-
Sub Total	**-**	**3,000**	**50,000**	**417,000**	**1,179,000**	**775,000**	**900,000**	**-**	**3,324,000**
Drainage									-
Construction incl. Customs and R&C	-		1,000	800,000	1,974,000	2,852,000	4,000,000	3,490,000	13,117,000
									-
Sub Total	**-**	**-**	**1,000**	**800,000**	**1,974,000**	**2,852,000**	**4,000,000**	**3,490,000**	**13,117,000**
Solid Waste									-
Construction incl. Customs and R&C	-	-	1,000	1,000	565,000	20,000	830,000		1,417,000
									-
Sub Total	-	-	1,000	1,000	565,000	20,000	830,000	**-**	**1,417,000**
Wastewater									-
Construction incl. Customs and R&C	-	-	-	50,000	17,000	15,000	-		82,000
	-	-	-	-	-	-	-		-
Sub Total	**-**	**-**	**-**	**50,000**	**17,000**	**15,000**	**-**	**-**	**82,000**
General									-
Community Activities	-	11,000	20,000	20,000	17,000	7,000	-	-	75,000
Training	-	1,400	1,300	2,000	2,000	1,300	-	-	8,000
Project Management	7,000	20,000	22,000	60,000	58,000	58,000	50,000	20,000	295,000
Sub Total	**7,000**	**32,400**	**43,300**	**82,000**	**77,000**	**66,300**	**50,000**	**20,000**	**378,000**
Total BAC LIEU	**7,000**	**35,400**	**95,300**	**1,350,000**	**3,812,000**	**3,728,300**	**5,780,000**	**3,510,000**	**18,318,000**

HA TIEN

Annual Construction Budget **All Costs in A$**

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006./2007	2007/2008	2008/2009	Total
HA TIEN									-
Water Supply									-
Construction incl. Customs and R&C	-	74,000	322,000	200,000	570,000	1,150,000	167,000	-	2,483,000
							-		-
Sub Total	**-**	**74,000**	**322,000**	**200,000**	**570,000**	**1,150,000**	**167,000**	**-**	**2,483,000**
Drainage									-
Construction incl. Customs and R&C	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-
Sub Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Solid Waste									-
Construction incl. Customs and R&C	-	-	-	-	513,000	517,000	333,000	-	1,363,000
									-
Sub Total	**-**	**-**	**-**	**-**	**513,000**	**517,000**	**333,000**	**-**	**1,363,000**
Wastewater									
Construction incl. Customs and R&C	-	-	-	50,000	25,000	-	-	-	75,000
						-	-	-	-
Sub Total	**-**	**-**	**-**	**50,000**	**25,000**	**-**	**-**	**-**	**75,000**
General	-								
Community Activities	-	-	5,000	20,000	21,000	4,000	-	-	50,000
Training	-	1,300	1,400	2,000	2,000	1,300	-	-	8,000
Project Management	7,000	20,000	22,000	60,000	58,000	58,000	50,000	-	275,000
Sub Total	**7,000**	**21,300**	**28,400**	**82,000**	**81,000**	**63,300**	**50,000**	**-**	**333,000**
Total HA TIEN	**7,000**	**95,300**	**350,400**	**332,000**	**1,189,000**	**1,730,300**	**550,000**	**-**	**4,254,000**

SA DEC

Annual Construction Budget **All Costs in A$**

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006./2007	2007/2008	2008/2009	Total
SA DEC									-
Water Supply									-
Construction incl. Customs and R&C	-	-	1,000	150,000	266,000	833,000	1,200,000	300,000	2,750,000
									-
Sub Total	**-**	**-**	**1,000**	**150,000**	**266,000**	**833,000**	**1,200,000**	**300,000**	**2,450,000**
Drainage									-
Construction incl. Customs and R&C	-	-	-	-	-	458,000	367,000	300,000	1,125,000
									-
Sub Total	**-**	**-**	**-**	**-**	**-**	**458,000**	**367,000**	**300,000**	**825,000**
Solid Waste									-
Construction incl. Customs and R&C	-	-	-	-	-	483,000	850,000	150,000	1,483,000
									-
Sub Total	**-**	**-**	**-**	**-**	**-**	**483,000**	**850,000**	**150,000**	**1,333,000**
Wastewater									
Construction incl. Customs and R&C	-	-	-	34,000		33,000			67,000
				-	-	-	-		-
Sub Total	**-**	**-**	**-**	**34,000**	**-**	**33,000**	**-**		**67,000**
General									
Community Activities	-	-	-	20,000	25,000	5,000	-		50,000
Training		1,300	1,300	2,000	2,000	1,400	-		8,000
Project Management	4,000	31,000	40,000	50,000	50,000	50,000	50,000	10,000	285,000
Sub Total	**4,000**	**32,300**	**41,300**	**72,000**	**77,000**	**56,400**	**50,000**	**10,000**	**343,000**
Total SA DEC	**4,000**	**32,300**	**42,300**	**256,000**	**343,000**	**1,863,400**	**2,467,000**	**760,000**	**5,008,000**
									-
Grand Total	**18,000**	**163,000**	**488,000**	**1,938,000**	**5,344,000**	**7,322,000**	**8,797,000**	**4,270,000**	**28,340,000**

x

Annex 4. Capacity Building and Training Summary

Training Category	Total Participants																
	Women's Union / MO		Ward PC / Town PC		Community / Volunteer/ CAC		WSC/PMU /PWC		Contractor / Others		Town / Province Dep Staff		AMC		TOTAL		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T
CD	82	308	126	33	115	179	76	36	14	21	116	126	32	19	561	723	1284
IEC	26	53	53	52	331	367	3	0	17	33	141	133	0	0	581	670	1251
SCS	2	202	12	6	32	63	8	0	181	0	2	1	2	1	239	273	512
Engineering	0	0	0	1	0	0	621	99	68	0	9	1	98	6	795	107	902
Institutional Development	110	138	41	11	46	33	961	517	18	0	19	6	11	12	1206	718	1924
Urban Planning	1	1	24	2	0	0	88	5	0	0	29	0	11	0	145	8	153
Total	**221**	**702**	**256**	**105**	**524**	**642**	**1757**	**657**	**298**	**54**	**316**	**267**	**154**	**38**	**3527**	**2499**	**6026**

x

Annex 5. Project personnel inputs

Position	Abbrev.	Personnel	Total inputs incl Variations		
			Aust.	VN	Project
Australian Team Members					
Long Term Personnel (months)					
Team Leader	ATL	Geoff Bridger	0	67.80	67.80
Engineering Coordinator (DTL) / O&M Adviser	DTL/OMA	Bill Chapman	0	77.00	77.00
Institutional Development/Training Adviser	IDT	Spencer / McLay	0	35.00	35.00
Community Development / Gender Adviser 1	CDA1	Penny Dutton	0	27.00	27.00
Community Development Adviser 2 (Deleted)	CDA2	Rosal Fischer	0	0	
Water Supply/Sewerage/Drainage Design Engineer	WSSD	Lindsay Mott	0	16	16.00
Civil/structural engineer	CSE	Philip Pigram	0	21	21.00
Construction Adviser (Ha Tien (FT)/Sa Dec)	CAS	Gary Whyte	0	50.63	50.63
Construction Adviser (Bac Lieu)	CAB	Bill Edwards	0	37.03	37.03
Construction Adviser (Bac Lieu)	CAB	Darren Flynn	0	34.20	34.20
Construction Adviser (Ha Tien)	CAH	Andrew Jackson	0	31.10	31.10
Total Australian Long Term Personnel			0	397.73	397.73
Short Term Personnel					
Inputs Shown In Days					
Project Director	APD	Martin O'Dell		218	218.00
Team Leader (Australia)	ATL	Geoff Bridger	40		40.00
Feasibility Study Reviewer	FSR	Khiem Si Dong		90	90.00
Hydrogeologist (VN & Australia)	HYD	Errol Briese		46.5	46.50
Solid Waste Specialist	SWS	Mark Koller		250	250.00
Structural Engineer Specialist (Australia)	SES	Lucinda Murray	29.85		29.85
Financial Management/Accounting Specialist	FMSv	Ian Walker		172.5	172.50
Strategic Urban Planning Specialist	SPS	David Barnes		90	90.00
Physical Urban Planner	PUP	Lawrie Wilson		330	330.00
Environmental Specialist	ENS	Howard Sullivan		90	90.00
Geotechnical engineer	GE	Howard Sullivan		60	60.00
Electrical/Controls Engineer	ECEv	Eugene Izis		330	330.00
Electrical/Controls Engineer (Australia)	ECEa	Eugene Izis	82		82.00
Bid Documentation Specialist (Australia)	BDS	Angela Bushell	57.73		57.73
Wellfield Drilling Adviser	WDA	Warren Westphal		80	80.00
Drafting Specialist	DS	Mike King		180	180.00
Monitoring and Evaluation Specialist	MES	Ian Teese		105	105.00
Procurement Specialist (Australia)	PS	KC Theng	165		165.00
Specialist Advisers/Trainers	ST			63	63.00
Total Australian Short Term Personnel			374.58	2105	2,479.58
VN Design Consultants WASE					
Team Leader Chief Eng (Design & Construction)	cedc	Dang Duy Tinh		24	24.00
Project Manager Bac Lieu (Senior Engineer)	pmbl	Tran Van Uyen		22.00	22.00
Project Manager Ha Tien (Senior Engineer)	pmht	Nguyen Quoc Binh		22	22.00
Project Manager Sa Dec (Senior Engineer)	pmsd	Nguyen Chi Hieu		22	22.00
Engineers (6 No.)	eng	6 No.		120.23	120.23
E&M Technicians (3 No.)	tech	3 No.		63.5	63.50
Surveyors and Investigation Technicians (6 No.)	Surv	6 No.		124	124.00
Drafters (3 No.)	dra	3 No.		65.5	65.50

Position	Abbrev.	Personnel	Total inputs incl Variations		
			Aust.	VN	Project
Document Production (2 No.)	doc	2 No.		45	45.00
Construction supervisors (6 No.)	cs	6 No.		256	256.00
Total WASE			0	764.23	764.23
VN Professional Team Members					
Community Development VP	po1	Le Thi Hao		59.77	59.77
IEC Specialist	po2	Le Dai Tri		2.99	2.99
IEC VP	po2a	Ng Than Nhan		29.0	29.00
Data Management/Computer Systems VP	po3	Quynh Dao		33.0	33.00
O & M/Tech VP 1	po4	Ho Ky Vinh		62.5	62.50
O & M/Tech VP 2	po5	Vu The Danh		53.50	53.50
Procurement VP	po6	Ng Ngoc Tam		43.8	43.77
Institutional Development VP	po7	Troung Tien Hai		54.00	54.00
Urban Planner 1	up 1	Bui Ng Ngoc Trai		19.13	19.13
Urban Planner 2	up 2	Replaced		8.00	8.00
Strategic Planner	sp	Le Hong Ke		9.38	9.38
Gender specialist	po8	Thu Nhung Mlo		4.80	4.80
Resettlement & Comp. Specialist		Huu Luu		9.82	9.82
Resettlement & Compensation PO		Kim Hong		32.30	32.30
Total Vietnamese Professionals			0	421.99	421.99

x

Annex 6. ICR Terms of Reference

Three Delta Towns Water Supply and Sanitation Project
Independent Completion Report
14-25 July 2008
TERMS OF REFERENCE

1. BACKGROUND

The overall goal and purpose of the project is to improve the welfare of residents of Bac Lieu (Bac Lieu province), Ha Tien (Kien Giang province) and Sa Dec (Dong Thap province) urban wards and communes by rehabilitating and extending water supply, drainage, wastewater and solid waste management facilities and services. Around 282,000 residents in the urban and peri-urban areas of the three towns will directly benefit through an increased water supply, reduced flooding risks and improved environmental sanitation facilities and practices. The project also aims to develop the capacity of local institutions and community groups to manage these systems on a sustainable basis.

The estimated total project cost is up to AUD 77.2 million, with the Government of Vietnam expected to contribute AUD 28.3 million and the Government of Australia AUD 50.4 million. A one year and eight month (through to 20 June 2008) no-cost extension of the project was approved in 2002. GHD Pty is the Australian Managing Contractor (AMC).

Due to significant delays experienced in earlier years of the project, to date only approximately 75 percent of the physical construction program (involving water supply, drainage and solid waste landfill in three towns) has been completed (against a planned 100% construction completion date of October 2007). The main causes of delays have been related to slow provincial contract tendering and approval processes and slow finalisation of resettlement and compensation claims.

Technical Advisory Group (TAG) has expressed concerns over the potential quality concerns largely resulting from the lack of supervision by Australian engineers of critical works (such as the water treatment plant structures, treated water reservoirs, intakes, pumping stations and associated electrical and mechanical installation and commissioning works at these sites) should Australian engineering inputs not be extended. FMA 9 approval for project extension (through to October 2008) and additional costs was obtained on 27 June 2007.

The AMC has submitted a hand over strategy which includes the following two phases:

<u>April – July 2008 – Supervision and handover phase</u>

- During the 4 months from April through July 2008 the AMC will progressively hand over full responsibility for remaining construction works in Bac Lieu and Sa Dec to the respective PMUs. The strategies for this have been discussed between the AMC and PMUs, and the following procedures will be adopted in each town.

<u>August – October 2008 – Monitoring and commissioning phase</u>

- Provision has been made in the Contract Amendment for inputs of key personnel after July 2008, until the current contract ends at the end of October 2008. The purpose of this is to allow the AMC to continue to provide the necessary inputs for commissioning of works that will not

be completed by the end of July. During this phase the AMC will intermittently monitor construction activities supervised by the PMU, and guide the PMU through commissioning of completed works. The PMUs will be expected to carefully plan and schedule commissioning activities together with the E&M supplier, and to provide the AMC with at least 2 weeks notice of commissioning dates to allow mobilisation of the Engineering Manager and O&M Project Officer.

Current construction scheduling indicates that solid waste landfill will be completed in Ha Tien by July 2008 (Water Supply component already completed), the water supply component and solid waste landfill civil works will be completed by July 2008 in Bac Lieu and Sa Dec. With respect to drainage, Tran Huynh Canal (Bac Lieu) and West Canal (Sa Dec) are expected to commissioned by July and October 2008 respectively. If these drainage milestones are achieved before October 2008, any construction work remaining after October 2008 should be at a sufficiently advanced stage that no further AMC involvement is required.

An overview of the project achievements is summarised below:

- Approximately 71,000 residents in the 3 towns (between 30% and 40% of the urban populations) have improved environmental health knowledge through the Project's IEC programs, which are being continued since November 2006 by the 3 Town People's Committee (TPC). Approximately 99,000 residents in the 3 towns (between 45% and 60% of the urban populations) are direct beneficiaries of the Project's community infrastructure. The Sanitation Credit Scheme (SCS) is continuing to be operated by the 3 Towns Women Union (TWU) since 2004. 140,000 residents in the 3 towns benefit from improved water supply service through new and upgraded systems.
- The completion survey (CS) showed a 70-80% reduction in reported water related health problems in the project towns, a 90% reduction in gunaecological problems across the 3 towns, a 75% reduction in reported Diarrhoea and eye/skin related problems, and a 95% reduction in reported internal worm problems across the 3 towns. It also indicates that 15-25% of reporting households have implemented improved water and sanitation practices.
- Bac Lieu connections coverage between 2001 and 2008 increased from 32% to 63% of urban population (target 90% for each town). Ha Tien connections coverage between 2001 and 2008 increased from 18% to 71%. Sa Dec connections coverage between 2001 and 2008 increased from 38% to 87%. Laboratory equipment and training provided as new water treatment plants are put into operation. Water quality testing and monitoring system are being introduced.
- Greater awareness of customer service has been the most successful output of the non-technical Institutional Development (ID) program, as demonstrated by the replication of customer skills training by the Water Supply Company (WSC) themselves, customer development conferences and household surveys that strengthen the awareness of customer issue.
- The CS reported high satisfaction rates (95%) with water company services, particularly in arranging connections and in managing meter reading and billing. Lower satisfaction with water quality (80%-85%) but more than 90% in Ha Tien where treatment plant is operating and providing reliable all year round water supply.
- Non-revenue water (NRW) reduction program ongoing in all towns with task forces operational, equipment and fittings provided, and NRW metering zones being established. Benefits in terms of reduced NRW will gradually become evident especially in Sa Dec as new and replacement pipelines are connected to the system.

2. OBJECTIVE

The objectives of the Three Delta Towns Water Supply and Sanitation Project Independent Completion Report (ICR) are two-fold:

a. To report on the relevance, effectiveness, efficiency, impact and sustainability of the Three Delta Towns Water Supply and Sanitation Project, with particular reference to lessons learnt from this intervention, and

b. To make recommendations on viable options for enhancing the sustainability of the project outcomes.

3. SCOPE OF SERVICES

The ICR team will be provided with the relevant project documents prior to the commencement of the in-country mission and receive an in-country briefing on arrival in Ha Noi from AusAID Ha Noi. The Team will:

- Review and assess selected project reports and other necessary records/ information available to validate the performance data presented in the project Completion Report (CR), eventually producing an Appraisal Note on the AMC-drafted CR setting out clearly any revisions or additional work to be undertaken by the AMC.
- Prior to the in-country mission, produce a Focus Paper for the mission covering the approach to undertake the ICR, an outline of program for site visit, a summary of issues and major points for consideration.
- Meet with the Three Delta Towns WSS Project Australian Team Leader (ATL) in-country. The ATL will provide a detailed briefing on project implementation including achievements and lessons learnt. The discussion should focus on the issues outlined in the Focus Paper and agreed with AusAID.
- Conduct field visits of project sites and meet with appropriate counterpart officials and project stakeholders to discuss project implementation issues, benefits, strengths and weaknesses.
- Present at a mission debrief with the Project team in Ho Chi Minh City;
- Present at a mission debrief with AusAID Ha Noi, including preparation of a Note of Findings.
- Produce an ICR in accordance with the Guidelines. The "Preparing Completion Reports for AusAID – Interim Guidelines" document attached to this TOR provides specific requirements and guidance on the actual content, methodology and format of the ICR for the Team.

4. DURATION AND PHASING

The Three Delta Towns WSS Project ICR mission will take place in-country from 14th July to 25th July 2008. A detailed schedule of meetings will be prepared by the AusAID Activity Manager in consultation with the Team and made available to the Team before the mission commences. Proposed approximate timing for the mission is:

- 3 days travel time;
- 3 days of desk literature review prior to mission;
- 3 days for the Team Leader and 2 days for the second team member to prepare the Focus Paper and the Appraisal Note on the CR;
- 9 days of in-country activities, and
- 5 days for Team Leader and 3 days for the other team member for production of the ICR.

5. KEY DOCUMENTS AND DATES

Task/Output	**Time allocated**	**Date**
Desk review of documents	3 days	
Collated comments on the draft Activity Completion Report		By 8 July 2008
A Focus Paper for the mission covering the approach to undertake the ICR, an outline of program for site visit, a summary of issues and major points for consideration.	2 days	By 11 July 2008
Travel to Ha Noi	1 day	13 July 2008
Briefing AusAID Post, travel to the three towns	2.5 days	14, 15 July 2008
Field Mission	9 days	16-24 July 2008
Debriefing in Ha Noi – Presenting the Aide Memoir	0.5 day	25 July 2008
An Appraisal Note on the AMC-drafted ACR of no more than 10 pages (excluding annexes), setting out clearly any revisions or additional work to be undertaken by the Three Delta Towns WSS Project AMC.		By 25 July 2008
Preparation of Draft ICR	5 days	
A draft ICR in line with the requirements of current AusAID guidance.		By 15 August 2008
Revision of ICR	2 days	
A final ICR, incorporating comments from AusAID on the draft ICR.		Within 5 days of receiving comments on the draft ICR from AusAID.
Total Days	**25 days**	

6. TEAM SPECIFICATION

The Three Delta Towns WSS Project ICR Team will be comprised of two consultants.

a. The Team Leader (TL), Mr Edwin Shanks: responsible for directing, coordinating and managing the assignment, including the submission of the ICR to AusAID. The TL has experience working on program design, management and assessment of rural development and poverty reduction programs, especially from the perspectives of organizational and institutional development of rural services and community-based organizations involved in rural service provision. He also has extensive practical and methodological experience with Participatory Rural Appraisal and public opinion surveys in a wide range of development sectors and issues. He is particularly responsible for the institutional development impact assessment and analysis of institutional change processes and service delivery.

b. The second team member, Alastair Hugh: experienced in international development and water and sanitary consulting engineer with professional experience in urban and rural water supply, sewerage and sewage treatment. Successful management of multinational and multidisciplinary project teams for the planning, design, co-ordination and supervision of construction work. He will have a particular focus on cost analysis and economic impact analysis.

The AusAID Activity Manager (Mr Nguyen Van Thuan) will accompany the ICR team, as necessary, to facilitate any issues that arise.

The Three Delta Towns WSS ICR team members will be responsible for:

- Finalising all international travel;
- Liaison with AusAID Ha Noi Post (Mr Nguyen Van Thuan) for preparation/ finalisation of the work program and meetings schedule prior to the mission;
- Initial planning and review of relevant documentation as listed at 7 below;
- Coordination among team member on specific tasks during the mission, managed by the team leader; and
- Cooperating with AusAID to present and discuss the mission's Aide Memoir.

7. REPORTING REQUIREMENTS

The ICR team will produce the following reports according to the timeframe specified in the table of Section 5:

a. Collated comments on the draft Activity Completion Report.

b. A Focus Paper for the mission covering the approach to undertake the ICR, an outline of program for site visit, a summary of issues and major points for consideration.

c. An aide memoir at the completion of the mission prior to departure from Ha Noi, and

d. An ICR in the format outlined in Attachment **A.**

The ICR should be based on 'Preparing completion reports for AusAID – Guidelines' (Attachment A). It should be no more than 25 pages long plus annexes. The ICR should be a stand-alone document that can be read by an outsider without ready access to the Project Completion Report. The ICR's target audience is the community of professionals

implementing Australian aid, all of whom need credible, independent advice on the results of past efforts. This community includes such stakeholders as AusAID staff and management, counterpart governments, contractors, multilateral organisations, other donors, NGOs and universities. Accordingly, ICRs are published electronically.

The submission of draft ICR should be within three weeks of the Team's debriefing. The final ICR report should be submitted within 7 working days upon receiving feedback from AusAID.

The TL will have the principal responsibility of preparing and submitting the reports as required with consultation and contribution of other team member.

These documents should be sent electronically. The draft reports will be marked as draft and will have the revision date on the cover. Hardcopy report will be made available to AusAID upon request. AusAID will have ownership of all reports.

8. DOCUMENTS PROVIDED

Documents to be provided to the ICR team include:

- The Three Delta Towns WSS Project Design Document;
- Annual Plan 2008-09;
- Engineering and non-engineering TAG reports.
- Draft Activity Completion Report (prepared by the AMC);
- Subsidiary Arrangements (SA) and SA Amendments;
- Project Extension Strategy (Jan 06/updated in June 06);
- Project Handover Strategy (May 2008);

Other documentation can be made available upon request.

x

Annex 7. ICR Focus Paper

1. Scope of the ICR

1.1 Objectives

The objectives of the Three Delta Towns Water Supply and Sanitation Project (3DTs Project) Independent Completion Report are two-fold:

c. To report on the relevance, effectiveness, efficiency, impact and sustainability of the project, with particular reference to lessons learnt from this intervention, and

d. To make recommendations on viable options for enhancing the sustainability of the project outcomes.

1.2 Assessing overall quality of the initiative[26]

- To what degree did the initiative achieve its objectives, and how well did they contribute to higher level objectives in the program strategy?
- How robust was the system to measure ongoing achievement of objectives and results?
- How effectively was the initiative managed? To what degree did it provide good value for money?
- How appropriate is the sustainability of the initiatives outcomes?
- Was the initiative of the highest technical quality, based on sound analysis and learning?
- Taking those five factors into account, what was the overall quality of the initiative?

1.3 Lessons learnt

- Lessons of relevance to future water supply and sanitation projects in the Mekong Delta Region and other urban localities in Viet Nam, and to the Government of Vietnam's overall strategy and policies for urban water supply and sanitation;

- Lessons for AusAID on the design, management, implementation and supervision of similar urban infrastructure projects in Viet Nam and elsewhere.

1.4 Sources of information:

The main sources of information for the ICR will include the following:

i) Key project documents including the Project Design Document, Logical Framework Matrix, Risk Management Matrix, Annual Plans and reports of the AMC, TAG reports, the draft Activity Completion Report (ACR) and attached Working Papers etc.;

ii) M&E data and reports on technical evaluations, economics analysis and community surveys;

[26] AusAID (2007) Preparing Completion Reports for AusAID – Interim Guidelines

iii) A review of the assumptions and methodology used in the ACR to critically assess the validity of the conclusions regarding project outcomes and impacts;

iv) ICR meetings and discussions with project stakeholders including the province and town authorities and departments, AusAID, the AMC, water supply companies, scheme managers, project beneficiaries etc;

v) Supplementary data collected during the ICR Mission as required;

vi) A review of secondary information sources, including GOV legislation and sector studies.

2. Methodological approach and strategic issues

2.1 Project Goal

The Goal of the 3DTs Project is: *To improve the welfare of residents of Bac Lieu, Ha Tien and Sa Dec urban wards and communes by rehabilitating and extending water supply, drainage, wastewater and solid waste management facilities and services and to develop the capacity of local institutions and community groups to manage these systems on a sustainable basis.*

This Goal implies 3 inter-related sets of project 'outcomes' and 'impacts':

- First, to *'improve the welfare of residents'* – which may be evident, for example, through changes and improvements in health status and behaviour, economic opportunities, quality of life, quality of the environment etc;

- Second, to *'rehabilitate and extend facilities and services'* – which covers the technical quality and performance of the engineering outputs and service systems;

- Third, to *'develop capacity of local institutions and community groups'* – which is seen as a pre-requisite for sustainable management of these systems.

The main focus of the ICR will be to asses to what extent the project has achieved each of these elements of the Project Goal. Though this, the ICR will also assess to what extent the project has contributed to the higher level strategies and objectives of the Government of Viet Nam and Government of Australia for this sector.

2.2 Contextual analysis

The 3DTs Project was designed and has been implemented in the context of on-going rapid changes and developments in the Mekong Region that cover a complex mixture of economic, social, environmental and institutional factors.

Amongst others, these include: (i) continuing growth and restructuring of the rural and urban economy focused on commercial production for domestic and export markets; (ii) widespread 'rural industrialization' of the heavily populated delta provinces – with emerging environmental challenges and problems associated with water quality, agricultural and industrial effluent and waste disposal etc.; (iii) increasingly diverse and competing demands on both land and water resources from both urban and peri-urban residents and newly emerging industries; (iv) increasing demand for water and sanitation services amongst the general public as urbanisation increases and standards of living rise; (v) on-going decentralization of State Management functions to the provincial authorities under the

PAR Program, delegation of the responsibilities for investment project management to the local authorities, combined with government commitments to enhance participation of local communities under the Grassroots Democracy legislation; and (vi) increasing private sector activity in public service provision which requires improved regulatory systems to be introduced and enforced.

Given this highly dynamic project context – one essential focus of the ICR will be to assess how successfully the project has responded and adapted to these wider 'challenges' and 'opportunities' over the life of the project. This is to assess the 'bigger picture' in which the project has been operating and the influence of this on the project implementation strategy and outcomes. This is particularly in terms of:

- The extent to which the analysis made as part of project preparation and design was superseded by changing circumstances and priorities that necessitated changes in the project approach and implementation strategy;

- The efficacy of the project M&E system, how lessons were learned and extracted from early implementation experience, and acted upon in following plans and implementation;

- How successfully the project has adapted and applied the technical designs and strategies for urban water supply and sanitation to these changing institutional, economic, social and environmental contexts, and to emerging and future demands;

- Adaptation of the project implementation arrangements and mechanisms, and scheme management arrangements, to the on-going administrative reform and decentralization policies and objectives of the GOV and local authorities;

- The integration and coordination between project components (hardware and software components) and the scheduling and delivery of project inputs and resources to achieve the intended outputs and outcomes of the project.

2.3 Stakeholder assessment

As with all water supply and sanitation projects – the 3DTs Project has involved many stakeholder groups including: (i) the province and town authorities; (ii) the water supply companies; (iii) other province and town departments including the construction, transport, education and health sectors; (iv) local communities and different social / beneficiary groups and the mass associations; and (v) private sector construction companies etc. The introduction of new water supply systems, management arrangements and pricing policies results in new types of interaction and relationships between service providers and various clients / user-groups. The strongly competing demands on land and water resources in and around the rapidly growing urban areas means that, almost inevitably, there will be 'contested areas' in the implementation of major civil works projects such as this.

A second methodological focus of the ICR will, therefore, be to carefully triangulate between the viewpoints of these different stakeholder groups on project performance and outcomes. This is in order to assess:

- The extent to which the project has successfully targeted, actively involved and delivered benefits to the intended beneficiaries, including both women and men, and poor urban residents;

- The relevance and effectiveness of the Community Development (CD) and Information, Education and Communication (IEC) activities;

- The management of the project to identify the extent to which Vietnamese stakeholders, including both local government agencies, service suppliers and communities, have owned and participated in the project through a progressively implemented institutional strengthening process;

- The degree of convergence of opinion between different stakeholder groups on the extent to which the project has successfully addressed and delivered its intended

3. Component specific questions

The Project comprises 3 main project components covering the 3 towns (Bac Lieu, Ha Tien and Sa Dec). Under each, the technical sub-components (on water supply, drainage, waste water and solid waste management systems) are integrated with the community development and institutional development sub-components. Urban planning and infrastructure coordination are included, together with management of resettlement and compensation for households affected by construction. The fourth main component is on project management. This component structure enables the ICR methodology to focus on higher order questions related to project relevance, effectiveness, efficiency, impact and sustainability on an area-by-area basis (and to compare project outcomes between areas). This approach is sensible because the 'integrated' nature of the project sub-components was an essential feature of the initial project design as justified in the Design Document.

The ICR will address the following questions, and others identified during the mission:

3.1 Relevance

- How relevant was the design of the project (in terms of the component structure and objectives, sub-components, implementation strategy, resource inputs etc.) to the conditions that existed (a) at the outset of the project and (b) in retrospect today?
- How were decisions made (both at the project preparation stage and during implementation) on the balance of investments between water supply, drainage, waste disposal, sanitation and 'soft-ware' sub-components respectively? Was this an appropriate balance of investments?
- Was the scale and scope of the water supply, drainage and waste disposal investments and systems sufficient according to demand and actual requirement[27]?
- Have there been shortfalls in specific areas of investment or other types of resource inputs which have impacted on the overall relevance and effectiveness of the water supply, drainage and waste disposal systems?
- Did the community sanitation sub-component activities (e.g. the sanitation credit scheme, schools sanitation program, environmental health micro-activities…) represent a relevant range of responses to sanitation issues in the project areas?
- Has the project demonstrated 'relevance' of improved community sanitation either by building on existing demand or creating increased demand and awareness? Was the scale and scope of these activities sufficient and were they noteworthy?
- Was the Community Development strategy relevant in terms of the institutional mechanisms introduced to strengthen planning and feedback linkages between service suppliers, community groups and customers?

[27] It is noted in the ACR that while the Project focused on the key demand for improved water supply and aims to satisfy demand to year 2010, the project's integrated improvements in drainage, wastewater and solid waste are the first steps towards achieving GOV's Drainage and Sanitation Orientation Plans.

- Were the IEC methods, messages and materials used by the project relevant in terms of their appropriateness to local environmental and social conditions, cultural preferences and behaviors etc.?
- Were the project management arrangements and coordination mechanisms relevant to the institutional conditions that existed both at the outset of the project and latterly?
- Did the project adopt a relevant strategy for the provision and integration of Technical Assistance with the counterpart project management bodies and local authorities in order to enhance the effectiveness and efficiency of these TA inputs?
- Was the approach to training relevant in terms of helping to build institutional linkages and sustainable approaches to capacity building?
- Was the content of technical and managerial training provided by the project relevant according to actual demand and need?
- Has the project maintained its relevance in terms of taking opportunities to inform and/or influence national level strategy and policy on urban water supply and sanitation in Vietnam?

3.2 Effectiveness

- To what extent has the project delivered the intended physical outputs (i.e. engineering works) according to cost, schedule, quality and design specifications?
- How effectively has the project responded to and resolved difficulties that have arisen in the construction scheduling (e.g. as related to issues of inter-agency coordination, resettlement and compensation, the procurement process, contractor performance and price inflation)?
- To what extent has the project reached the intended targets for the number of beneficiaries of the water supply and sanitation facilities and services by the end of the project and beyond?
- How has the project targeted the needs of the poorest category urban residents to provide access to affordable WSS services? Has this been effective?
- Are there particular social groups / locational groups not covered by the schemes, and if so, what are their circumstances and what has been done to address this?
- How was community participation in planning the towns WSS undertaken (e.g. community advisory committees, community liaison officers)? How effective have these mechanisms been?
- In what ways did community consultation at the planning and design stages influence the design or management arrangements? Were the local authorities, supply companies or the project able to accommodate these community viewpoints?
- To what extent were service arrangements determined pre-project, or was flexibility built into the design process? What is the basis of on-going negotiations on service management arrangements and standards? Are these arrangements agreed / accepted by the local community and customers?
- The project has included a wide range of activities aimed at institutional development and strengthening the Water Supply Companies and community groups etc? In overall terms, how effective has this been?
- To what extent has the project been effective in stimulating improved customer service orientation amongst the town Water Supply Companies?
- In what ways has the capacity of the Water Supply Companies been enhanced with respect to the development and management of water supply services?
- The Community Development sub-component includes a wide range of activities aimed at increasing awareness of water, environmental sanitation and health linkages, and facilitation of improved neighbourhood and school environments. In overall terms, how effective have these been in addressing major sanitation issues?
- How effective have the IEC materials / messages on health and hygiene been in terms of awareness raising and behavior change?

- In what ways has the project promoted gender equity in strengthening the role of women in water supply and sanitation planning and implementation? How effective has this been?
- How effective have the project management arrangements, coordination and supervision mechanisms been in providing guidance to the project, resolving difficulties, promoting inter-agency coordination, and cross-province learning etc.?
- To what extent have the project management and implementation arrangements been conducive to counterpart agencies and other stakeholders to own and participate in the institutional strengthening process?
- Have the fund flow arrangements (for both GOA & GOV counterpart funds) been conducive to achieving timely delivery of the intended project outputs, and the quality of project outcomes?
- How are the TA personnel inputs provided by the AMC rated by the counterpart agencies in terms of their quality and effectiveness?

3.3 Efficiency

- Are the assumptions used in the cost-benefit analysis conducted by the project valid in terms of assessing the economic returns on investment[28]?
- Does the cost-benefit analysis validate the original project design in terms of the balance of investments and resources devoted to infrastructure, institutional and community development, and technical assistance?
- To what extent has the project represented value-for-money in terms of the quality and effectiveness of the Technical Assistance inputs provided through the AMC?
- To what extent do revenues (currently or expected future revenues) cover operational costs, operations and maintenance as well as capital replacement costs, thereby contributing to on-going efficiency and sustainability?

3.4 Impact and sustainability

- Are the conclusions drawn from the Completion Survey conducted by the project in March 2008[29], as well as from other M&E data, valid in terms of assessing customer satisfaction and preliminary impacts of the project?
- What added-value has the project brought to the management and implementation capacity of the WSS agencies in the area?
- Is there evidence to suggest that the expressed 'demands' or 'needs' for improved water supply and sanitation services have changed as a result of the project?
- What are the major factors that will impact on both 'physical sustainability' and 'institutional sustainability' of the schemes? Have these factors been anticipated and adequately addressed by the project?
- Have sufficient regulatory mechanisms been put in place by the Town authorities for on-going scheme management, service arrangements, and environmental regulation?
- Will the mechanisms introduced to facilitate linkages between service suppliers and customers be maintained in the future (e.g. community advisory committees, community liaison officers)? How might these mechanisms need to evolve to accommodate on-going scheme management?
- What human and budgetary resources do the Water Supply Companies have to maintain the level community involvement introduced by the project in the future?
- To what extent has the project introduced internationally recognised 'best practice' in MIS / M&E systems and indicators for WSS?

[28] ACR Working Paper – Economic Analysis (May 2008).
[29] ACR Working Paper – Completion Survey (March 2008)

- How effectively has capacity been built within the Water Supply Companies and other concerned agencies to operate and make use of these MIS / M&E systems and data outputs for analysis and reporting?
- To what extent will these systems be taken over and maintained by the Water Supply Companies after project completion?
- Which of the various activities under the Community Development sub-component will be maintained in the future by the local authorities and counterpart agencies (e.g. IEC methods, community sanitation activities and credit systems etc.)?
- Will funding be made available for maintaining these activities?
- Is the Handover Strategy prepared by the AMC adequate in terms of providing the basis for on-going management of the schemes and unfinished works?

4. Discussion topics for meetings with the PPCs

During these meetings, it is proposed to focus on 4 main questions. These can be used as a starting point for more detailed discussion and questions as time allows...

1. Based on the experience of the 3 Delta Towns Water Supply and Sanitation Project – what are the main lessons that can be drawn for the GOV National Orientation Plans for Urban Water Supply and Drainage and other similar projects in future?

2. What are the main factors that need to be addressed (both immediately and in the longer term) to help ensure the sustainability of the WSS schemes and services supported by the 3DTs Project?

3. From the province perspective – what have been the 'most successful' and 'least successful' aspects of the 3DTs Project? What have been the main 'strengths' and 'weaknesses' as compared to other donor supported projects working in the province?

4. What recommendations can be given by the PPC to AusAID on the design and implementation of future AusAID projects in Viet Nam? This is with respect to: (i) project financing and implementation arrangements; (ii) appropriate Technical Assistance inputs including advisors; and (iii) interventions in the urban water supply and sanitation sector?

x

Annex 8. Itinerary and List of Persons Met

Names	Position and Institution
BAC LIEU	
Meeting with Bac Lieu WSC, 8:00-10:30 16 July 08	
Ms Nguyen Thi Phuong Thao	Officer, Department of Construction (DOC)
Ms Truong Thi Nghi	Officer, Women Union (WU)
Mr Huynh Quoc Ca	Deputy Director, DOC
Mr Le Van Son	Director, Water Supply Company (WSC)
Ms Nguyen Thi Van	Head, WU
Ms Huynh Thuy Hang	Director, DOLISA
Meeting with Bac Lieu PPC, 14:00-15:00 16 July 08	
Mr Duong Ngoc An	Director, DOC
Mr Le Thanh Dung	Director, Department of Planning and Investment
Mr Tran Anh Thi	Officer, Pronvincial People's Committee (PPC)
DONG THAP	
Meeting with Dong Thap PPC, 10:00-11:00 18 July 08 in Cao Lanh	
Mr Le Vinh Tan	Vice-chair, PPC
Mr Nguyen Van Duong	Officer, PPC
Mr Ly Khoi Van	Director, WSC
Meeting with Dong Thap WSC, 14:00-16:30 18 July 08 in Cao Lanh	
Ms Thanh Phuong	Vice-Director, DOC
Ms Thuy	Vice-President, WU
Mr Buu	Head of Planning Division, DOET
Mr Nguyen	Officer, Department of Health
Mr Ly Khoi Van	Director, WSC
Ms Chau	Officer, Dong Thap Project Management Unit (PMU)
Meeting with Sa Sec TPC, 9:00-10:00 19 July 08	
Mr Tong Kim Quang	Chairman, Town People's Committee (TPC)
CAN THO	
Mid-ICR Workshop with AMC, 8:30-11:30 21 July 08	
Geoff Bridger	Australian Team Leader
Bill Chapman	Deputy Australian Team Leader

Gary White	Construction Advisor, Sa Dec
KIEN GIANG	
Field visit and Meeting with Ha Tien TPC, 8:00-11:00 22 July 08	
Mr Tran Ngoc Tho	Head of Ha Tien Branch Office, WSC
Mr Nguyen Van Lam	Deputy Head of Ha Tien Branch Office, WSC
Mr Tran Chi Dung	PMU Site Supervisor
Mr Tran Minh Hue	WASE Supervisor
Mr Diep Phi Hung	Vice-chairman, TPC
Mr Huynh Van Thang	Director, Ha Tien Section of Public Works
Meeting with Kien Giang WSC, 14:00-16:00 22 July 08 in Rach Gia	
Mr Nguyen Duc Hien	Director, WSC
Mr Mai Kim Thanh	Deputy Director, WSC
Ms Nguyen Thu Nhanh	Vice-President, WU
Mr Thai Ngoc Tuong	Department of Education and Traininng
Meeting with Kien Giang PPC, 8:30-9:30 23 July 08 in Rach Gia	
Mr Le Huu Hung	Vice-chair, PPC
Mr Nguyen Duc Hien	Director, WSC
Mr Mai Kim Thanh	Vice-Director, WSC
Mr Huynh Xuan Vu	DPI Expert
Mr Trinh Van Trung	Secretary, PPC
HCM CITY	
Meeting with Ministry of Construction	
Dr Pham Nogoc Thai	Director, Management Board for Urban Technical Infrastructure Development Project, MOC
Mr Ho Ky Vinh	Group Manager – Water, GHD HCM City

x

Annex 9. Review of Activity Completion Report

In general, the ICR Team believes that the Project Completion Report (PCR) and attached Working Papers and Completion Surveys are of a very high standard as compared to many other projects. The project experience is well described and analysed. The results and conclusions are generally sound and well substantiated by M&E data. Good attention has been given to utilising and summarising both output and outcome indicators against the original Logical Framework Matrix and Key Performance Indicators. The PCR also provides a useful final analysis and list of lessons learned from the initiative.

The ICR Team has only two suggestions for improvements that can be made to the PCR – these are, in our view, crtitical aspects in which the analysis of factors influencing implementation progress and outcomes needs to be strengthened:

- Firstly, the section on Sustainability is limited (Section 6.2). In Table 11 (page 29) the AMC makes a self-assessment of overall project quality and outcomes, in which a relatively low score is given to sustainability aspects. However, the text does not elaborate on this viewpoint and Section 6.2 says very little directly about sustainability. This needs to be addressed by the AMC given the uncertain situation that exists at the end of the project with respect to completion of some works and short-term and long-term prospects for viable operations and maintenance and financing systems.

- Secondly, it is suggested that the report should reflect more deeply on the project management and coordination arrangements, and respective roles and responsibilities of the partners, to assess how effective these have been. This should include more self-reflection on the part of the AMC – for instance, Section 4.3.5 (AMC management) gives very little indication of the strengths and weaknesses of the management configuration and TA inputs provided, of constraints and difficulties encountered and how these were overcome. The ICR mission has concluded separately that in certain critical respects the intended mechanisms for establishing joint-accountability and quality control were not fully adopted; it would be useful if the PCR also reflected on such issues in more depth.