Socialist Republic of Vietnam

Capacity Building for the Management, Planning and Coordination of the Sanitation Sector at Subnational Level in Vietnam

Summary Report

10 June, 2016

GWASE

EAST ASIA AND PACIFIC
Capacity Building for the Management, Planning and Coordination of the Sanitation Sector at the Subnational Level in Vietnam (P132458)

SUMMARY REPORT

6 June 2016
**List of acronyms**

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<td>Centre for Flood Control and Sanitation</td>
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<td>U3SAP</td>
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<td>WSP</td>
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Summary

Context
Sanitation Services Management in Vietnam

1. The combined effects of urbanization and economic growth have created increasing pressure on Vietnam’s ageing and inadequate sanitation infrastructure and services. Water pollution by industrial wastewater also causes significant economic damage, impacting the quality and output of aquaculture products. In addition, wastewater from trade villages and aquaculture is causing adverse environmental impacts.

2. In most urban centers up to 50% of the urban population are living in “deprived” conditions\(^1\) and the environment is degraded by a number of factors relating to poor sanitation such as uncollected and untreated waste water, polluted surface water (rivers, lakes and coastal waters), polluted ground water, uncollected solid waste, clogged drainage systems, and industrial pollution.

3. Ministry of Health (MOH) statistics show that 6% of all diseases are related to polluted water and 3% of deaths are due to water-borne diseases. A 2008 Water and Sanitation Program (WSP) study on the economics of sanitation in Vietnam\(^2\) found that poor sanitation accounts for some 7.05 million cases of diarrhea per year and 4,600 deaths. The study estimated that water- and sanitation-related diseases were responsible for 34% of the US$780 million annual economic impact of poor sanitation in Vietnam.

4. Another major challenge in Vietnam’s sanitation sector is the failure to provide satisfactory solid waste management services, which has resulted in air and water resource pollution. Eye, skin, and respiratory diseases are more common in the residential areas neighboring landfills that do not conform to national environmental regulations and standards.

5. The Government has recognized these challenges and the need for an umbrella strategy to address all aspects of environmental sanitation in a comprehensive manner. The concept of a unified sanitation sector strategy came out of a regional water and sanitation meeting in 2005, and since then WSP has facilitated a national-level dialogue leading to the formulation of the Unified Sanitation Sector Strategy and Action Plan (U3SAP) proposal.

6. The Draft Final Report on the U3SAP was submitted to the Ministry of Construction (MOC) in March 2013. It highlighted many of the challenges and identified priority action plan needs in the

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management of wastewater and solid waste, covering safe and hygienic collection, transport, treatment and disposal. The key issues to be addressed include:

- inadequate investment in the sanitation sector,
- poor cost recovery and lack of commercial orientation in service provision,
- technical challenges in the management of surface water drainage, wastewater and solid waste,
- limited technical and managerial capacity,
- inconsistencies in the policy framework,
- absence of sector leadership, and
- limited public concern for environmental protection.

Rationale for Providing Technical Assistance to Can Tho City

7. Although MOC has not yet been able to gain inter-ministerial support for implementation of the U3SAP, there is general recognition that many of these challenges will take time to address and that they can only be tackled effectively if human resources capacity in the sector is improved. Given these delays at the central level of government, this TA will pilot the development of capacity building for the management, planning and coordination of sanitation services at the provincial level - in the city of Can Tho.

8. Under the scope of the U3SAP technical assistance a Sanitation Development Plan was developed for Can Tho city as a pilot. This Plan was approved by Can Tho City Peoples Committee by its decision No. 2508/QD-UBND dated August 12, 2013. The City Sanitation Development Plan for Can Tho (the City Sanitation Plan) aims to coordinate the environmental sanitation activities of the city departments, the district peoples committees, and other related agencies in the city. The City Sanitation Plan focuses on urban drainage, wastewater collection and treatment, and solid waste management activities, as well as providing direction and guidance to improve environmental conditions in rural areas, industrial zones, handicraft villages, and medical institutions. The City Sanitation Plan will be implemented in 2 phases: a short term phase during 2013-2016 and long term phase during 2016-2020.

9. Can Tho is the largest city in Mekong Delta prioritized economic zone. The city has 5 urban districts and 4 rural districts with a total population of around 1.2 million (5th largest city in Vietnam). The principal commercial activities of the city are agriculture, industry, trade and services. The average annual economic development rate during the last five years was 13.5%.

10. Despite the efforts of the City in recent years, the technical infrastructure systems of the city (including drainage, wastewater collection and treatment, and solid waste management) remain under-developed and there are inequalities in access to sanitation services. It is estimated that 59% of the population have access to a flush toilet – 47% indoor and 12% outdoor (2009 Census data).

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3 Sanitation Development Plan for Can Tho City prepared by Can Tho City Technical Team and U3SAP TA consultants, September 2012.
remaining 41% will use a latrine.

11. In the approved City Sanitation Plan, the City has set very clear targets for developing poor-inclusive sanitation infrastructure systems. By 2016, the City plans to develop and improve policies, strengthen institutional arrangements, mobilize adequate financial resources, introduce appropriate/advanced technologies, implement education programs, and build capacity to support the successful implementation of the second phase the Plan. By 2020 the City plans to have improved the drainage system to reduce flooding, to have completed a wastewater collection and treatment system that can serve all urban areas of the city, and to have implemented a solid waste management system that can adequately cope with the volume of solid waste generated by the city.

12. To implement the City Sanitation Plan, the City decided to establish a City Environmental Sanitation Coordinating Committee (the Sanitation Committee), to be chaired by the Vice Chairman of the City Peoples Committee, with the Director of the city Department of Construction (DOC) as a standing member. The Sanitation Committee, in collaboration with the city Department of Planning and Investment (DPI) and Department of Finance (DOF), will be responsible for the development and implementation of capacity building programs to improve and strengthen sanitation management and planning capacity in related state management agencies and service providers.

13. A Study on Human Resources was undertaken as part of the U3SAP technical assistance. The conclusions and recommendations of this study inform the scope of this TA. At the provincial level, DOC (the Infrastructure Division) is the department most involved in urban sanitation management. Identified capacity building needs included: using information technology (IT) for managing infrastructure data; specialized training on planning, and appropriate technologies for surface water drainage, waste water and solid waste treatment; drafting of legal documents, and; updating knowledge on sanitation policies. The capacity building needs of the PPC’s Urban Management and Economic and Infrastructure Division include: planning, coordination and monitoring skills; knowledge on sanitation management and related legislation, and; project management. Staff from the Department of Natural Resources and Environment (DONRE) often lack the required skills and training for the inspection and management of violations of environmental regulations related to wastewater and solid waste management.

14. In many provinces it was also noted that there is a shortage of sanitation managers (DOC, DONRE, PPC Urban Management Divisions and relevant offices at district level) and that the majority have to take on other responsibilities beyond sanitation. Their basic qualifications and expertise in planning and managing urban wastewater and solid waste services are often limited, especially at district and town levels.

15. Operators are generally seen as weak in management, operations and maintenance, financial

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management and customer services. Technical aspects of wastewater treatment and solid waste management (e.g. recycling and energy recovery) are also areas requiring new training and qualifications.

16. A number of universities, colleges and vocational schools provide potentially relevant degree and certificate programs, but they often lack qualified lecturers and modern curricula capturing up to date technical and operational experiences. In addition, many training institutions have inadequate teaching facilities and there is significant scope for improving teaching methods. There are no colleges and vocational schools that offer training in wastewater treatment.

17. From the above it is apparent that a program of human resources development is needed by Can Tho city to support the development of adequate technical, operational and policy/planning capacity in sector institutions. To meet this challenge the city authorities will require a medium to long term human resources capacity building program. In the short term, however, it will be critical to focus on elements that will help improve the city’s capacity to start implementing its poor-inclusive City Sanitation Plan - especially in terms of sector planning, coordination, monitoring and evaluation.

18. This message has been reinforced recently through a World Bank diagnostic study on urban resilience in Can Tho which identified six “immediate measures” for the city, one of which was to consolidate the momentum for sanitation capacity building – “to develop and implement capacity building programs to improve and strengthen sanitation management and planning capacity”. With respect to inclusiveness, this study also noted that there is no participation of civil society and user groups under the current sanitation management arrangements, and that there is a need to expand the sanitation services to include all districts and end users in Can Tho, including informal settlers. It will be important that capacity building and training programs specifically address the issue of inclusiveness in sanitation planning and management – specifically on giving society a voice and providing improved sanitation access to poor/informal communities.

19. The assignment was divided into three main tasks, as follows:

   - Support the City to establish and strengthen the organization of the City Sanitation Committee, by developing a “working protocol” for that committee
   - Verify the training gaps identified under the earlier U3SAP study by conducting an assessment of capacity development gaps of the City Sanitation Committee, its members and other local sector stakeholders
   - Develop a capacity development strategy and training plan for identified stakeholders, while identifying a number of priority trainings, develop curricula for these priority trainings and deliver these

**Task 1 – Develop and pilot a subnational level working protocol for the sanitation sector**

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20. To implement the City Sanitation Plan, the City had originally decided to establish a City Environmental Sanitation Coordinating Committee (the Sanitation Committee), which was to be chaired by the Vice Chairman of the City Peoples Committee (CPC), with the Director of the city Department of Construction (DOC) as a standing member. The Sanitation Committee was to comprise representatives from all the stakeholder committees, agencies and departments involved in managing sanitation in the city: the Department of Planning and Investment (DPI); Department of Finance (DOF); Department of Natural Resources and Environment (DONRE); Department of Health (DOH); Department of Industry and Trade (DOIT); Department of Agriculture and Rural Development (DARD); Ninh Kieu District People’s Committee; Binh Thuy District People’s Committee; Cai Rang District People’s Committee; O Mon District People’s Committee; Thot Not District People’s Committee; Phong Dien District People’s Committee; Phong Dien Town People’s Committee; Can Tho Urban Construction Sole Member Limited Liability Company; Can Tho City Water Supply and Waste Water Sole Member Limited Liability Company.

21. When the consultancy commenced work it was discovered that the “City Sanitation Committee” had yet to be established in Can Tho (as was assumed in the ToR of the assignment). The Can Tho authorities unanimously suggested that the establishment of a “committee” would not be effective enough to tackle and solve the problems the city is facing - committees in the Vietnamese context usually have a temporary character only and consist of leading officials who assume their posts concurrently to their existing duties and therewith lack the time and motivation to initiate and manage necessary changes. Therefore, the authorities and WSP agreed that the consultant should support the city (under task 1) in its ongoing efforts to establish a “City Sanitation Center” rather than a “committee”.

22. The Report on: Study for the Establishment of Can Tho City Center for Flood Control and Urban Sanitation (CFCUS) and Tentative Working Protocol for Relevant Agencies in Can Tho focuses on the following:

- Reviewing the existing situation of the sanitation sector functions, duties and organizational structures related to drainage, flood control, wastewater and solid waste (domestic, medical, industrial) in Vietnam and in Can Tho
- Assessing the operation of Ho Chi Minh City’s model on drainage and sanitation management, including the operational model and functions of the Ho Chi Minh City Flood Control Center
- Proposing institutional arrangements and a tentative working protocol for Can Tho city for the drainage, flood control and sanitation management

23. Modeled after the “Flood-control Center” of Ho Chi Minh City, this “Can Tho City Sanitation Center” would be an entirely new professional organization, directly subordinated to the CPC, with its own human and financial resources, taking over a leading role in managing the sanitation sector of the city on behalf of CPC, while reducing the roles of the city departments, districts and wards to their actual state management, rather than operational functions. Led by the Department of Construction, the consulting team collaborated with a task force consisting of members from each line department to
develop a comprehensive proposal (instead of a “working protocol”) drawing up and recommending various options for the establishment of the “City Sanitation Center”, including possible tasks, responsibilities, authorities as well as financial and organizational implications of each option.

24. The Study recommends the following institutional arrangements for the Center:

- report to the Can Tho CPC with separate legal status and its own seal, and its own staff - subject to the organizational and operational direction and management of CPC
- financial autonomy, with revenues coming from drainage, sanitation and solid waste management fees (via City Treasury - with roadmap to O&M cost recovery), state budget, and the public management fund (for investment projects)
- carry out the operation and maintenance of the drainage and wastewater collection/treatment systems, and solid waste management in all Can Tho’s districts
- be the owner of drainage, wastewater, flood control and solid waste projects (as assigned by the Can Tho City PC). Organize, inspect, monitor and supervise the preparatory activities and implement the projects
- coordinate with DOC, DONRE, DARD and the relevant departments and agencies in the management of drainage and sanitation services in Can Tho, and with DOC, DPI, DOF and District People’s Committees (DPCs) on the development of sanitation plans for the City
- coordinate multi-sectoral and multi-basin activities in the sanitation sector
- develop regulations on household connections to sanitation networks
- organize the implementation of communication activities and customer/community relationship management
- develop and implement strategies, programs, and plans for capacity strengthening relating to sanitation management

Figure 1 summarises the proposed organization structure of the reformed Can Tho sanitation sector after the CFS has been established and Figure 2 the proposed sanitation management model after the CFS has been established (after initial transition arrangements). The Steering Committee will advise the CPC in the management of sanitation related activities. WASSCO is the City’s principal water and wastewater utility (Water Supply-Sewerage Joint Stock Company).
Figure 1. *Organization Structure of the Reformed Can Tho Sanitation Sector After the CFS has been Established*

Figure 2. *Sanitation Management Model for Can Tho for the Period from 2020-onwards.*
Task 2 – Capacity needs assessment and develop a poor-inclusive capacity development strategy and plan for Can Tho

25. Given the realignment of the TA to focus on the establishment of a “City Sanitation Center” (rather than a “committee”) the original scope of Tasks 2 and 3 were amended. The assessment of capacity development needs as presented in the Report on Capacity Needs Assessment of the Sanitation Sector in Can Tho City, therefore, is an assessment of needs of existing stakeholders (line departments, other involved authorities and operators/utilities) rather than that of the future center. Similarly, the capacity development strategy, the training plan and the priority training curricula can only be developed on the basis of the assessment conducted with the existing stakeholders.

26. It is assumed, however, that the future officials of the “City Sanitation Center” will partly be recruited from existing departments and agencies and that therefore the outputs produced under tasks 2 and 3 will, after a review and slight adaptations, also fit the needs of the human resources of that Center.

(i) Capacity Needs Assessment

27. Based on the situation described above, the Report on: Capacity Needs Assessment (CNA) of the Sanitation Sector in Can Tho City pursues the following main objectives:

- Analyzing the current institutional framework of the sanitation sector of Can Tho city, while identifying problems and bottlenecks that hinder an improvement in sector performance
- Identifying the needs for training and capacity development of local government stakeholders and infrastructure operators in the sanitation sector
- Verifying and cross-checking the training gaps identified in the Can Tho City Sanitation Development Plan prepared under the Can Tho U3SAP pilot project
- Providing conclusions and recommendations for the capacity development strategy and training plan to be developed under task 3 of the consultant’s assignment

The approach for this CNA followed the methodological elements presented below:

- Review of supplied written information on human resources, such as educational level, past training records, job descriptions, future staffing projections, staff development plans, etc.;
- In-depth interviews with leaders (directors and vice-directors)
- Group discussions with relevant staff of each agency
- Written questionnaires for each relevant staff member identified to assess individual training needs
- The presentation and discussion of a list of possible topics and capacity development areas in the sanitation sector that trainings could be required in. In each meeting the list of topics was introduced by consultants carefully and used as an input for the subsequent discussion. Leaders
and staff were asked to add topics they feel missing and then to prioritize the most pressing of these topics based on the urgency (immediate, mid-term, long-term demand) of the demand.

- A rapid survey of local and regional (Can Tho & Ho Chi Minh City) training providers, such as universities and vocational schools.

(ii) Sanitation Capacity Strategy and Action Plan

28. The Government of Can Tho city has committed to develop its city’s sanitation sector into a role model for all cities in Vietnam. Its vision is an environmentally sustainable clean, green and beautiful Can Tho, free of litter, clean surrounding rivers and pollution-free air, land and water.

29. Based on this policy statement and the CNA findings presented above, a Sanitation Capacity Strategy and Action Plan was developed. Seven sector management priorities were identified. The City administration’s development objective for the sanitation sector and the identified sector management priorities are presented in figure 2 below. Strategic goals, core strategies and key actions were identified for each of the seven pillars of the capacity development strategy – to be implemented by 2015.

| CAPACITY DEVELOPMENT STRATEGY UNTIL 2025 FOR THE SANITATION SECTOR IN CAN THO CITY |
|------------------------------------------|-------------------------------------------|
| **Overall Development Objective:**      | Ensure a high quality of life to our citizens through cost-effective sanitation services that leave a minimum environmental footprint. |
| 1. Regulation & Policy                   |                                           |
| 2. Sector Organization                   |                                           |
| 3. Finance and Cost-recovery             |                                           |
| 4. Community Participation               |                                           |
| 5. Human Resource Management             |                                           |
| 6. Asset Management                      |                                           |
| 7. Research & Private Sector Development |                                           |
Task 3 – Develop tailored training programmes for city agencies and deliver critical/priority training

30. Annex 1 shows the identified training needs and recommended training course topics for key sector stakeholders that resulted from the CNA. It also shows the ranking of the training topics. Based on the findings presented above a Critical/Priority Training Program was developed. The Critical/Priority Training Program comprised the following 6 training courses:

- Wastewater Fundamentals
- Decentralized Sanitation Planning for Peri-Urban Areas
- Urban Storm Water Management
- Construction Contract Management
- Strategic Corporate Development Planning for Public Service Utilities
- Managing Performance-based Operation Contracts in Public Sanitation Services

31. The six training courses were implemented (in Vietnamese) in Can Tho City in April 2016. Detailed training curricula, training reports and training documentations for each of the six courses are available in Vietnamese and English language. The Critical/Priority Training Program schedule and course summaries are attached to this report in Annex 2. Each course was attended by 11 – 17 participants from relevant City departments, agencies, operators and district government.

Objectives and Results

32. The development objective of the TA is to support the City Peoples Committee and DOC in implementing the poor-inclusive City Sanitation Plan by providing expertise to develop curricula, guidelines and training programs to increase implementation capacity for the Plan.

<table>
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<tr>
<th>Intermediate Outcome</th>
<th>Indicators</th>
<th>Results</th>
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</table>
| Improved capacity in sanitation sector management at the provincial/city government level. | - Can Tho Sanitation Committee develops its working protocols  
- Training program curriculum is developed  
- Basic training is delivered on sector planning, operations and management, and capital investment  
- Knowledge and experience sharing between provincial agencies is undertaken | - Modified to reflect proposal to establish Sanitation Centre. Proposed institutional arrangements and tentative protocols developed with City authorities  
- Priority training topics identified in consultation with key stakeholders and staff  
- Six priority training courses developed and delivered to key staff in City departments and agencies  
- Other provinces have already used and carried out training using some of the priority training courses developed for |
33. The Development Objective was broadly met. The City Sanitation Plan will be implemented through a proposed new agency, the City Center for Flood control and Urban Sanitation. The TA supported the City in developing recommendations for institutional arrangements for establishing the Center and associated tentative working protocols. A curriculum (priority training topics) was developed, and six priority training courses developed and delivered to key staff in City departments and agencies. A number of provinces and bilateral donors have already used and carried out additional training using a few of the priority courses developed for Can Tho – demonstrating knowledge and experience sharing has taken place.

**Gender**

**Strategic Goal 5** of the Capacity Development Strategy Until 2025 for the Sanitation Sector in Can Tho City is to: recruit, train and maintain a professional, loyal, integrated and dedicated workforce for all state management agencies active in the sanitation sector. Within this:

**Core Strategy 5.5:**
Particularly encourage women working in the city administration to apply for training courses and aim that at least 40% of leadership positions in the administration are held by women by 2021.

Key actions are:

- Develop a gender equity policy applicable for every state management agency in the city of Can Tho.
- Introduce realistic recruitment quota for women for each agency and set financial disincentives for non-compliance.
- Include paragraphs on preferential treatment of women in job postings and in the city’s training regulation.
- Post advertisements in local newspapers and public panels with the message to encourage women to apply for jobs in the city administration.

**Social Inclusiveness**

**Strategic Goal 4** of the Capacity Development Strategy Until 2025 for the Sanitation Sector in Can Tho City is: transparency and high quality services in exchange for active citizen’s contribution and appropriate environmental behavior. A number of strategies and key actions have been proposed to guide Can Tho City in achieving this goal by 2025:
Core Strategy 4.1:
Ensure a high transparency and accountability for investments as well as O&M funds and full public disclosure of the use of collected tariffs and other key financial data.

Key Actions:

1. Frequently publish and update key financial performance data related to tariffs and operations on the city’s website.
2. Provide fund disbursement data of non-private investment projects on request to citizens.

Core Strategy 4.2:
Initiate a community dialogue and seek citizen’s contributions to draft a set of sanitation service standards that will be promulgated in public and are an integral and binding part of performance based O&M contracts for wastewater and solid waste services.

Key Actions:

1. Research international best-practices for service standards in wastewater and solid waste services.
2. Develop a set of draft service standards.
3. Develop a community consultation plan.
4. Implement community meetings and focus group discussions to retrieve feedback and revise standards.
5. Conduct a community stakeholder workshop involving mass organizations and representatives of the party, people’s councils and local media; ratify service standards on workshop.
6. Publish final service standards on website, in brochures and in service contracts.
7. Conduct a round of community meetings every 2 years to discuss the achievement and revision of standards.

Core Strategy 4.3:
Educate our young generations to set seeds for a life dedicated to environmental protection, compassion and sustainability.

Key Actions:

1. Develop and implement public awareness campaigns targeted at parents and families encouraging to discuss environmental issues at home and to educate children in appropriate behavior from early childhood onward.
2. Make environmental education an integral and obligatory part of school curricula in the city, develop teaching materials, train teachers and evaluate effectiveness in regular city wide school competitions on environment.
Core Strategy 4.4:
Mobilize all strata and groups of the community, with a special consideration of the poor, to actively contribute with pro-active, self-driven action and financial contributions.

Key Actions:

1. Allocate budget and set-up an annual fund that gives out grants to private non-government initiatives (e.g. student cleaning campaigns).
2. Advertise fund on city website, provide detailed project application instructions, application forms, eligibility and auditing criteria.
3. Conduct annual project competition with an equal, fair and transparent selection mechanism.
4. Use documentation of projects to advertise and raise awareness within and beyond the city.

Implementation, Dissemination and Scale-up

The new Bank lending project: Can Tho Urban Development and Resilience Project (P152851) will support the implementation of the outputs and recommendations of this TA. The Task Team were kept fully appraised of the development of this TA during the preparation of the project. A number of workshops have been held with relevant stakeholders in the City.

Course contents of three of the priority training courses (01 on Wastewater Fundamentals, 04 on FIDIC Contract Management Regulations, and 05 on Strategic Corporate Development Planning for Public Utilities in the Sanitation Sector) have been disseminated, or will be in June 2016 to participants from other provinces in the scope of other ODA projects e.g. ADB (Greater Mekong Sub-region Corridor Towns Development Project) and DANIDA (Training project in connection with the operation of 5 wastewater treatment projects and 1 water supply project). These provinces include: Cao Bang, Ha Giang, Thanh Hoa, Tay Ninh, Quang Tri, Hau Giang, Dak Lak, and Quang Binh.

In addition to that, JICA, in connection with their ongoing Wastewater Sector Training Center project (with MOC), has shown a very high interest in these (and the other training materials developed under the TA). They would like to use the training contents for their training center so that the center can offer these training's to all 63 provinces in Vietnam in the future.

The outputs will also be shared with GIZ and the German Water Partnership who are active in national sanitation management capacity building with the Vietnam Water and Sewerage Association. The outputs will be also shared with the members of the Vietnam Wastewater Donor Coordination Group (chaired by ADB).

The outputs will be discussed with MOC as an example of best practice in urban sanitation management in Vietnam and could form the basis for national policy guidance in the sector. The Bank will also use the outputs to inform policy dialogue and the design of future projects eg the proposed Coastal Cities Sustainable Environment Project which has a component for institutional reform for urban sanitation management in the four project cities (Dong Hoi, Quy Nhon, Nha Trang and Phang Rang).
### STATE MANAGEMENT FUNCTIONS

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<th>DoVRE</th>
<th>SMAB</th>
<th>DART</th>
<th>DPI</th>
<th>DoIT</th>
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<td>1.1 Policy Formulation Skills</td>
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<td>6</td>
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<td>1.2 Strategic corporate development planning for urban utilities</td>
<td>3</td>
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<td>1.4 Contract Management (contractors, service providers, operators)</td>
<td>2</td>
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### MANAGEMENT AND ORGANISATION SKILLS

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### TECHNICAL KNOWLEDGE

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### PUBLIC RELATIONS

| 4.1 Basic Communication Skills | 5 | 5 | 4 | 5 | 4 | 5 | 3 | 1 | 20 |
| 4.2 Planning and Implementation of Behavior Change Communication Campaigns | 3 | 4 | 5 | 5 | 5 | 5 | 1 | 28 |
| 4.3 Mass Media Information Management | 2 | 4 | 4 | 5 | 2 | 3 | 20 |
| 4.4 Presentation and Rhetoric Skills | 4 | 3 | 3 | 5 | 2 | 4 | 2 | 26 |
| 4.5 Community Participation in Sanitation | 4 | 3 | 3 | 5 | 3 | 4 | 1 | 20 |
| 4.6 Complaint and Conflict Management | 4 | 4 | 4 | 5 | 3 | 3 | 2 | 3 | 30 |

### ADDITIONALLY REQUESTED TOPICS

| 5.1 Emergency and Risk Prevention and Management | 2 | 5 | 5 | 32 |
| 5.2 Optimization of O&M Procedures of WWT Systems | 2 | 5 | 7 |
| 5.3 Project Proposal Evaluation: social-economic, financial | 5 | 5 |
| 5.4 Effective and Efficient Project Management | 4 | 4 |
| 5.5 Team Working Skills | 4 | 4 |
| 5.6 Project Cycle Management | 5 | 5 |
| 5.7 Decentralized Treatment Solutions for Medical Waste and Sewage in densely populated Areas | 5 | 5 |
| 5.8 Decentralized Treatment Solutions for Medical Waste and Sewage in Small Hospitals / Rural Health Stations | 5 | 5 |
| 5.9 Automatic Quality Control of Clean Water, River Water, and Medical Wastewater | 5 | 5 |

- **Training topics as the most critical**
- **Training topics stand second for priority**
- **Training topics as special needs of specific departments**
Note: The numbers in the columns reflect the reported level of importance placed on the learning topic by the various stakeholders in Can Tho City’s sanitation management – departments, utilities, district government (scored 1-5, with 5 reflecting the highest priority). Those topics with the highest total priority rating were deemed the most critical and were incorporated into the content of the Priority Training Courses given under the TA.
## Priority Training Courses

*provided to key stakeholders in the sanitation sector in Can Tho city during March-April 2016 (update March 12, 2016)*

<table>
<thead>
<tr>
<th>Course code</th>
<th>Date</th>
<th>Duration [days]</th>
<th>Course Title</th>
<th>GFA Trainers</th>
<th>Target Organizations</th>
<th>Main Course Content</th>
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<td>WSP-01</td>
<td>March 24</td>
<td>1</td>
<td>Wastewater Fundamentals</td>
<td>Võ Văn Tiến</td>
<td>Doc (4), DARD (2), DoT (1), DoT (2), WAESCO, Wastewater Enterprise (2), Ninh Kieu Urban Management Office (2), Bình Thuỷ Urban Management Office (2), CEPolta (1), CPCO (2), ODA-PMU (2), (Total: 20)</td>
<td>The content of this course will comprise explanation of basic hydraulics, pumping stations, etc., causes and consequences of water pollution; major categories of wastewater sources; composition and characteristics of domestic wastewater; elements of a wastewater treatment system; description and explanation of trickling filter technology.</td>
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<tr>
<td>WSP-02</td>
<td>April 6</td>
<td>1</td>
<td>Decentralized Sanitation Planning for Peri-Urban Areas</td>
<td>Đặng Thị Linh &amp; Nguyễn Hoà Long</td>
<td>CPC (3), Ninh Kieu Urban Management Office (3), Bình Thuỷ Urban Management Office (3), DoT (5), WAESCO (2), DARD (2), ODA-PMU (2), (Total: 20)</td>
<td>The course will enable participants to understand the wide range of technical options and application possibilities for decentralised wastewater treatment plants that utilise close-to-nature treatment processes, are low-cost and easy to replicate by local means, not requiring imported technologies. The course will be tailored for urban planners, engineers and environmental managers.</td>
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<tr>
<td>WSP-03</td>
<td>April 7</td>
<td>½</td>
<td>Urban storm Water Management</td>
<td>John Rockhold &amp; Nguyễn Hoà Long</td>
<td>CPC (2), Ninh Kieu Urban Management Office (2), Bình Thuỷ Urban Management Office (2), DoT (3), CCCQ (1), WAESCO (2), Can Tho Urban Service JSC (2), (Total: 16)</td>
<td>The course will be an introduction to urban storm water management, in particular rain water detention and ground water infiltration in these urban settings, giving practical examples from other countries and an overview on technical, geological and financial requirements.</td>
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<tr>
<td>WSP-04</td>
<td>April 12-13</td>
<td>2</td>
<td>Construction Contract Management</td>
<td>Nguyễn Thị Hoằng &amp; Bùi Văn Thành</td>
<td>ODA-PMU (3), CPC (2), Ninh Kieu PC (2), Bình Thuỷ PC (2), DoT (5), WAESCO (3), Can Tho Urban Service JSC (2), (Total: 16)</td>
<td>The content of the course will include HOI Design and Build Principles, description of the roles of all parties, contract management including contract variations, solving of disputes, etc.</td>
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<tr>
<td>WSP-05</td>
<td>April 19-20</td>
<td>2</td>
<td>Strategic Corporate Development Planning for Public Service Utilities</td>
<td>Chris Żarski &amp; Nguyễn Thọ Hạnh</td>
<td>CPC (2), DoT (4), WAESCO (5), Can Tho Urban Service JSC (5), CPCO (5), (Total: 11)</td>
<td>The course will enable participants to understand the time and resources required and the various steps that are to be taken to develop a strategic Corporate Development Plan for their organisation. Particular emphasis will be paid to the involvement of local authorities in the entire planning process. Participants will leave the course with a draft roadmap on &quot;how to plan their own plan&quot; and will be encouraged to implement this roadmap upon return to their workplace.</td>
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</table>
Contents Overview for Courses:

01 – Wastewater Fundamentals

Contents Overview for Course
Training Session Key Learning Objectives

Opening Session
After this session participants will:
- Know the trainer and his/her professional background
- Know each other better
- Know why they are here and what will happen during the next couple of days
- Have shared their personal expectations for the training outcomes

Session A: Basic concepts of wastewater
After this session participants will:
- Have an overview of wastewater, where does wastewater come from, how many sources which produce wastewater
- Know basic elements of wastewater
- Understand chemical and physical processes in the nature

Session B: Basic elements in collection systems
After this session participants will:
- Have an overview of the entire sewerage system
- Understand basic operation modes of components in a sewerage system

Session C: Centralized wastewater treatment plant
After this session participants will:
- Understand the operation of Bac Ninh wastewater treatment plant
- Know basic principles of components in Bac Ninh wastewater treatment plant
- Be shared practical information of the plant operation
- Know difficulties and challenges during operation

Closing session
After this session participants will:
- Understand necessary processes for the operation of sewerage systems
- Know difficulties and challenges as the basis for coming up with recommendations for improvements
- Have an informal agreement with other participants to regularly stay in touch

02 – Decentralized Sanitation Planning for Peri-urban Areas

Training Session Key Learning Objectives

Opening Session
After this session participants will:
- Know the trainer and his/her professional background
• Know each other better
• Know why they are here and what will happen during this training, and what this training is about
• Have shared their personal expectations for the training outcomes

**Session A: Terms and Definitions**
After this session participants will:
• Have learned basic terms related to sanitation planning and decentralised wastewater management / treatment

**Session B: Framework Conditions**
After this session participants will:
• Understand what kinds of regulations, guidance and legislations need to be in place before sanitation planning should be endorsed and implemented
• Have developed a deeper understanding on (potentially) missing framework conditions in Can Tho

**Session C: Decree 80 as the legal basis for improved decentralized wastewater management discussion**
In this session participants will learn about the legal background for city sanitation, and its relevance for DWWM

**Session D: Basics of Sanitation Planning**
After this session participants will:
• Understand the concept of “sanitation planning”
• Understand the advantages and disadvantages of sanitation planning
• Understand how to develop a sanitation plan

**Session E: Drafting a Sanitation Plan for Can Tho City / Group Work**
Group work
After this session participants will:
• Understand the structure and content of a typical city sanitation plan

**Session F: Decentralised Wastewater Management as a Core Element of Sanitation Planning**
After this session participants will:
• Understand the concept of DWWM and its potential applications

**Session G: Selection of Appropriate DWWT Technologies**
In this session participants will learn about the typical DWWT technologies, their applications and advantages / disadvantages

**Session H: Operation and Maintenance of DWWT Plants**
After this session participants will:
• Understand the definition of O&M
• Understand why O&M is crucial for sustainability in sanitation

**Session I: Site Visit DWWT Plant at Cai Khe Market / Lessons Learnt / Discussion**
After the site visit and following discussion, participants will have a deeper understanding of the many obstacles and hurdles that may occur when a DWWT project is implemented.

**Session J: Summary of Workshop Results (Fish Bowl), Workshop evaluation, Closing Session**
After this session participants will:
• Have discussed and clarified open issues
• Have evaluated the training course
• Have consolidated their new knowledge and skills gained during the training event
• Have an agreement with the trainer to stay in touch regarding follow-up activities
• Have an informal agreement with other participants to regularly stay in touch and exchange on management contract development processes in their utilities
03 – Urban Storm Water Management
Training Session Key Learning Objectives

Opening Session
After this session participants will:
- Know the trainer and his/her professional background
- Know each other better
- Know why they are here and what will happen during this training, and what this training is about
- Have shared their personal expectations for the training

Session A: Terms and Definitions
After this session, participants will:
- Have learned basic terms related to stormwater management

Session B: Stormwater Management - Basic Considerations and Group Discussion
After this session, participants will:
- Understand the many elements of a stormwater management system, and to what extent those elements are available in Can Tho City.

Session C: Stormwater Management in Urban Areas - Traditional and modern approaches for dealing with stormwater runoff, O&M issues / group discussion
After this session, participants will:
- Have gained an overview on the many technical options and solutions for drainage, storage, retention and use of stormwater. O&M issues will be discussed.

Session D: Software Tools for Stormwater Management
After this session, participants will:
- Understand the need for applying suitable software solutions in stormwater management
- Have learned the features and potential applications of an exemplary software solution

Session E: Summary of Workshop Results, (Fish Bowl), Workshop evaluation, Closing Session
After this session, participants will:
- Have discussed and clarified open issues
- Have evaluated the training course
- Have consolidated their new knowledge and skills gained during the training event
- Have an agreement with the trainer to stay in touch regarding follow-up activities
- Have an informal agreement with other participants to regularly stay in touch and exchange on stormwater management

04 – FIDIC Contract Management
Training Session Key Learning Objectives

Opening Session
After this session participants will:
- Know the trainer and his/her professional background
- Know each other better
- Know why they are here and what will happen during this training, and what this training is about
- Have shared their personal expectations for the training

Session A: Construction contracts - FIDIC & Viet Nam
After this session participants will:

- Have overview of FIDIC contracts (Red Book, Yellow Book, Silver Book, Green Book, Golden Book, White Book);
- Have overview of Viet Nam construction contracts (Decree 48/2010 and Decree 37/2015), including construction consulting contract, construction contract, technological equipment supply contract, engineering & construction contract (EC), Engineering and Procurement contract (EP), Procurement and Construction contract (PC), Engineering Procurement Construction contract (EPC), Turnkey contract, and contract on provision of equipment, materials and workmanship.
- Have basic knowledge on FIDIC Plant Design & Build Contract (Yellow Book), Advantages & Disadvantages of D&B contract; considerations for the selection of Plant & DB contract;
- Comparison between FIDIC Plant Design Build Contract and Viet Nam EPC contract

**Session B: Management of FIDIC Plant and Design - Build Contract in Viet Nam**

After this session participants will:

- Understand activities of contract, including key events, payment events, dispute settlement.
- Understand roles and responsibilities of Parties, including the Employer, Consultant and Contractor.
- Understand design (FIDIC Article 5): design phases, design approval as required by Vietnamese authorities;
- Understand quality management, equipment, materials and workmanship (FIDIC Article 7 and Article 13, Decree 48/2010 & 37/2015):
- Understand knowledge on time management (FIDIC Article 8; Article 14 Decree 48/2010 & Article 14 Decree 37/2015): commencement of works, time for completion, progress program, etc.
- Understand requirements of testing, acceptance and taking-over (FIDIC Articles 9 & 10);
- Understand requirements of Defects Notification Period (FIDIC Article 11): performance certificate, etc
- Understand requirements of financial articles, including variation and adjustment (FIDIC Article 13; Article 35 of Decree 48/2010 & Article 37 of Decree 37/2015), contract price and payment
- Understand content of other articles: termination by the Employer, suspension and termination by the Contractor, risks and responsibilities, insurance, force majeure, claims, disputes and arbitration
- Topics related to contract management as required by Viet Nam (Decree 48/2010 & 37/2015)

**Closing Session**

After this session participants will:

- Have evaluated the training course and passed a final test
- Have consolidated their new knowledge and skills gained during the training event
- Have an agreement with the trainer to stay in touch regarding follow-up activities

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**05 – Strategic Corporate Development Planning for Public Service Utilities**

**Training Session Key Learning Objectives**

**Opening Session**

After this session participants will:

- know the trainer and his/her professional background
• Know each other better
• Know why they are here and what will happen during this training, and what this training is about
• Have shared their personal expectations for the training

**Session A: Introduction to Corporate Development Planning and Strategic Thinking**

After this session participants will:
• Be able to distinguish between logic of strategic and operational thinking processes
• Understand the importance for leaders of organisations to think strategically
• Understand the ratio of strategic corporate development planning and the difference to normal business planning
• Agree that CDPs are a suitable and feasible tool for wastewater utilities in Vietnam
• Have learned basic terms related to corporate development planning

**Session C: Useful Methods & Tools for the Corporate Planning Process**

After this session participants will:
• Understand the advantages and disadvantages of participatory group discussion techniques
• Have an overview of a selection of tools and methods that are available to facilitate visualized group discussions
• Be able to point out the advantages and disadvantages of each tool and decide which tool to apply in which situation

**Session D: The CDP Elaboration Process**

After this session participants will:
• Have a thorough understanding of the extent and duration of the process of elaborating a CDP
• Be able to realistically assess how complex and resource intensive the CDP elaboration for their own company is going to be
• Be able to identify which parts of the CDP process the companies can do by themselves and which parts will need external consulting support

**Session E: Data Collection & Analysis – Scan Yourself and Your Environment**

After this session participants will:
• Understand the importance of the availability of reliable primary and secondary data about the company’s internal and external environment.
• Have an overview about the types of data required for a proper CDP elaboration and about which collection tools are available
• Be able to plan and steer various data collection and environmental scanning processes required for the SWOT analysis of their company.
• Have a basic understanding of SWOT analysis framework and its application for a strategy formulation
• Be able to practically apply the SWOT analysis tool to their own purposes

**Session F: The Policy Statement**

After this session participants will:
• Understand the purpose and importance of a policy statement for a strategic planning process
• Have studied a number of practical examples of policy statements from inside and out of Vietnam
• Comprise of a first draft policy statement for their own company
• Know how to formulate their own final policy statement after the training course

**Session G: Formulate Strategies and Strategic Goals**

After this session participants will:
• Understand how to transform SWOT analysis results into strategies (by use of TOWS analysis framework)
• Understand the difference between strategies and strategic goals
• Understand that goals have to be prioritized and balanced
• Be able to formulate mid-term development strategies and SMART goals for their utilities

**Session H: Action Planning & Budget Forecast**
After this session participants will:
• Be able to organize and conduct the action planning process in their companies
• Understand the importance of letting all key staff participate in the planning process
• Understand the importance of coming up with realistic and affordable actions
• Understand how to realistically set time frames and project costs and required budgets

**Session I: Examples of CDPs**
After this session participants will:
• Know practical examples for CDPs and action plans of other wastewater utilities in Vietnam
• Have a clear picture of what a CDP looks like, its size and extent

**Session J: The CDP Implementation Process**
After this session participants will:
• Be able to steer the CDP approval and implementation process within their companies
• Understand that involvement of asset owners and other local authorities in the entire planning process is crucial to obtain approval and to receive funding for implementation
• Understand how to communicate and cascade a CDP down to individual staff level and to ensure that the CDP is “lived” by the management and all staff
• Understand how to monitor the implementation of a CDP
• Understand the CDP updating and review cycle

**Session K: The CDP Roadmap – Plan your Plan!**
After this session participants will:
• Have an individual plan (roadmap) how to elaborate a CDP in their own company (including a rough time frame)
• Have a clear idea about the next steps they need to take after returning from the training vent to their utility
• Know which steps of their planning process will require external consulting support

**Closing Session**
After this session participants will:
• Have evaluated the training course and passed a final test
• Have consolidated their new knowledge and skills gained during the training event
• Have an agreement with the trainer to stay in touch regarding follow-up activities
• Have an informal agreement with other participants to regularly stay in touch and exchange on the CDP development processes in their utilities

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**06 – Managing Performance - based O&M Contracts in Public Sanitation Services**
**Training Session Key Learning Objectives**

**Opening Session**
After this session participants will:
• know the trainer and his/her professional background
• Know each other better
• Know why they are here and what will happen during this training, and what this training is about
• Have shared their personal expectations for the training

Session A: Terms and Definitions
After this session participants will:
• Have learned basic terms related to performance-based contracts

Session B: Framework Conditions
After this session participants will:
• Understand what kinds of regulations, guidance and legislations need to be in place before management contracts should be endorsed and implemented

Session C: Contract Preparation Stage
After this session participants will
• Understand what steps need to be taken prior to signing a management contract with a future operator

Session D: Performance-based contracts. Performance Indicators
After this session participants will:
• Understand the concept of “performance-based contracts”
• Understand how to develop, apply and survey performance Indicators

Session E: Contents of a Management Contract
• After this session participants will:
  • Understand the structure and content of a typical management contract

Session F: Reporting
After this session participants will:
• Understand the rational for regular reporting
• Understand what and how needs to be reported

Session G: Typical Problems Arising During Contract Execution
In this session participants will:
• Understand about the many potential problems and obstacles that may arise during contract execution

Session H: Drafting a Management Contract for Can Tho City
After this session participants will:
• Be able to draft a template for a management contract

Session I: Presentation and Discussion of Group Working Groups’ Results
The discussion on the outcomes of the group work will make trainees understand about the complexity of management contracts in public utilities

Session J: Summary of Workshop Results, (Fish Bowl), Workshop evaluation, Closing Session
After this session participants will:
• Have discussed and clarified open issues
• Have evaluated the training course
• Have consolidated their new knowledge and skills gained during the training event
• Have an agreement with the trainer to stay in touch regarding follow-up activities
• Have an informal agreement with other participants to regularly stay in touch and exchange on management contract development processes in their utilities