Poverty, Social and Gender Analysis

(DRAFT FINAL REPORT)

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TABLE OF CONTENTS

List of Tables:

ABBREVIATIONS

ADB	Asian Development Bank
ATP	Ability to Pay
DMF	Design Monitoring Framework
DWA	Department of Women's Affairs
FGD	Focus Group Discussion
GAD	Gender and Development
GAP	Gender Action Plan
GOC	Government of Cambodia
EMP	Environmental Management Plan
IPP	Indigenous Peoples' Plan
KHR	Cambodian Riel (2013: US$1=KHR4125)
LARP	Land Acquisition and Resettlement Plan
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MIH	Ministry of Industry and Handicraft
MPWT	Ministry of Public Works and Transport
O&M	Operation and Maintenance
PPA	Participatory Poverty Assessment
PPP	Purchasing Power Parity
PPWSA	Phnom Penh Water Supply Authority
PSGA	Poverty, Social and Gender Assessment
SES	Socioeconomic Survey
SPRSS	Summary Poverty Reduction and Social Strategy
SPS	Safeguard Policy Statement (ADB:2009)
WB	World Bank
WSA	Water Supply Authority
WTP	Willingness to Pay

EXECUTIVE SUMMARY

1. This Poverty, Social and Gender Analysis has been prepared by the PPTA Team to ensure that both MIME and ADB are able to understand how the Project will generate positive outcomes for the poor, women and other vulnerable groups notably the small number of different ethnic groups residing in most of the subproject towns. However, the analysis is not largely based on households that are currently served by existing WSA but rather households that are unserved because from a poverty, social and gender perspective it is those components of the overall Project that will enable these households to clearly benefit from the Project. The same argument applies to sanitation-related issues that are addressed in this PSGA but will not be financed by the Project with the exception of a public hygiene and sanitation program in Stung Treng (where over half of the Project's overall investment will be made).

2. The key to the successful implementation of this Project will be the commitment of MIME to supply household connections free-of-charge to 8,000 households currently not served in Siem Reap and 6,600 households in Stung Treng not currently served. This is definitively the pro-poor component of the Project because Stung Treng has the highest urban poverty rate with an average 2012 poverty rate of 21.3% followed by Siem Reap with a rate of 18.4%. Other quantitative indices including percentage of households living on US$1.25, US$2.00, US$2.50, US$4.00 and US$5.00 per capita, per day and average household income and expenditure levels based on the PPTA Socioeconomic Survey generally support this poverty bias as well although Siem Reap (a reflection of its pivotal role as the major tourist destination in Cambodia has high average incomes for it best-off households). The quantitative data is also corroborated by the qualitative data associated with ranking of poor and non-poor households and explanations for being poor.

3. The SES demonstrates that nearly all households interviewed ranked improved water supply as the number one priority but sanitation related improvements (better household toilet and bathing facilities) generally ranked lower than increased household income and enhanced food security with the exception of Kampong Cham (least poor of all nine cities included in the overall project). However, during FGD facilitated by the PPTA it was found that all priorities listed by the SES are priorities and simply ranking them is fine but there is no question that of course improved water supply and sanitation improvements are important priorities.

4. This is also indicated by a willingness to even pay for household connections and reasonable water consumption fees. Existing connections fees average approximately US$100 and if MIME for one reason or another decided it would not provide such connections free-of-charge even the very poorest households stated they could contribute towards household connection costs although they would prefer not to. It was suggested that be reducing connection fees to approximately US$50 would be more affordable than the existing fee. The PSGA demonstrates that the sustainability of MIME's investment will rest on whether or not local WSA are able to supply water in adequate quantities and of sufficiently high quality. Some households stated they would still continue to use existing sources of water because they are free-of-charge but it is argued in the PSGA that if the Project can deliver in terms of both quantity and quality these households are likely to change their mind. This was demonstrated during the FGDs where these householders participating on reflection could see the real benefits of the Project.

5. MIME's agreement to also focus on pro-poor issues reflects the fact that it bought into the stakeholder engagement processes from the outset of the Project. Initially there was some reluctance from the provinces to a greater poverty focus because their emphasis was on the physical infrastructure components. However, as the PSGA is able to document

having a female director of the Stung Treng WSA has greatly enhanced the poverty focus of the project but in addition the gender focus as evidenced by the interested displayed by the Stung Treng Department of Women's Affairs. It has been assumed that the framework exists for even greater stakeholder engagement leading up to the implementation and during actual project implementation.

6. The gender analysis embedded in the overall PSGA has demonstrated that women generally have a more systemic appreciation of the linkage between water and sanitation issues. Women simply do not just also need to use clean water but also have to manage sanitation-related household-based issues such as when household members fall ill due to lack of adequate sanitation facilities. Women and girls are also more aware of lack of privacy issues and their inability to ensure in some instances higher personal levels of bodily hygiene. The impacts reach beyond the household to public spaces such as markets and schools. Markets need to be clean to ensure food safety and girls (and their teachers) need both toilets with water in schools. The gender analysis does not argue men are insensitive to such issues but women are very sensitive. An argument is also made for women to be offered project-related waged employment and as an integral component of the gender empowerment processes to be actively involved in the monitoring and evaluation of the Project.

7. There are a small number of ethnic minority groups in the Project towns and these groups need to be considered as they are also entitled to receive benefits that will accrue to other Cambodians as a result of this Project. They should be entitled to free household connections (or if subsidized connections become the reality also entitled based on income not ethnicity), if land is to be acquired (unlikely according to existing feasibility studies) the same level of compensation, and the right to participate in any monitoring and evaluation processes. It is not argued that a standalone IPP is required.

8. Safeguards that are applied to ethnic minorities also need to be applied to all other households to ensure, for instance, that if water supply connections are provided free-of-charge by MIME that local WSA staff or contractors do not try and collect payments, albeit informally from households. The PSGA highlights the need to ensure that households continue to be well-informed about the Project and this is embedded in the Consultation and Participation Plan. The FGDs facilitated in each of the four project cities featured in the PSGA have enabled greater levels of information dissemination. Other mitigation measures associated with HIV/AIDS and other STIs and occupational health and safety issues that should be incorporated into the EMP have been highlighted in the PSGA.

9. In conclusion the Project provides significant benefits to women and men, poor and non-poor because access to clean water is essential for all human beings but if it were possible to more systemically link water and sanitation the Project would offer even greater benefits. Although it is recognized that institutional obstacles exist in Cambodia to this being a reality for this specific Project.

1. Introduction

1. The Poverty, Social and Gender Analysis (PSGA) provides an assessment of the social, poverty and gender equity status of the target beneficiaries (end water users) in the nine Project towns that will be served by the Cambodia Urban Water Supply Project (CUWSP); and the extent to which these factors were being perpetuated or reinforced by the lack of reliable potable water supply. It will also assess the positive and negative impacts of the Project on the target beneficiaries and the wider community in the Project towns. Based on this assessment, the PSGA will identify and prioritise the key issues and propose corresponding interventions to mitigate the Project's social risks and ensure the target beneficiaries inclusion and fair share of the Project benefits. Specifically in relation to gender issues it will be assessed to what extent both practical and strategic gender needs are met and whether intra-household dynamics and inter-household relations will be impacted upon as a result of this Project. From the outset a caveat should be stated that standalone projects cannot be expected to radically transform the nature of poverty, social relations or gender empowerment but rather contribute to incremental changes of a positive developmental nature.

2. The PSGA is organized by: (i) an overview of ADB's PSGA policy and guidelines; project background and links with the national poverty reduction and inclusive growth strategies; project outputs and social, poverty and gender impacts; (iii) the nine subproject towns socio-economic profile; (iv) an analysis of social development issues; (v) an analysis of poverty-related issues; (vi) an analysis of gender issues; (vii) a brief analysis of ethnic minorities that will be impacted upon by the Project; and (x) conclude with a summary of key issues . Data for the PSGA has been derived from a range of different sources including (i) a review of secondary sources both official governmental and a range of credible but non-official sources; (ii) the SES undertaken by the PPTA in June 2013; (iii) FGD facilitated by the PPTA during May and June 2013; (iv) visits to the sub-project towns and cities, especially Stung Treng, Siem Reap, Kampong Cham and Svay Rieng by PPTA Social Development Specialists; and (v) a special PPTA mission in September 2014 by a separate International Social and Gender Specialist to address the gaps in the PSGA. The SES has been organized so that baseline socio-economic data will be available for monitoring and evaluating the impact of the Project both implementation and post-implementation.

3. To ensure that poverty, social and gender issues would be incorporated into the PSGA the PPTA Social Development Specialists developed a Stakeholder Engagement Process and Impact on the TA Project that required that under-served and unserved households be surveyed and afforded the opportunity to participate in FGD. It was also stressed that poorer households, women, and where relevant ethnic minority households should both be surveyed and afforded the opportunity to participate in FGD. Moreover, to ensure that MIH at the local level understood the concerns of existing and potential customers FGD involving local officials and customers from different socio-economic backgrounds were facilitated.

2. ADB PSGA Policy and Guidelines

4. The PSGA is a policy requirement of ADB (A Handbook on Poverty and Social Analysis, 2012) and is usually carried out in the conceptual and design stages of ADB funded projects.

5. The purpose of assessing the poverty impact and social dimensions of project preparation is to provide information on the: (i) links of the project to the national poverty reduction strategy and the Country Partnership Strategy (CPS); (ii) the poverty targeting classification and its justification; (iii) key poverty and social issues (including gender) of the potential beneficiaries including the impact channels and expected systematic changes; (iv) opportunities and constraints for client/beneficiaries, particularly the poor and marginalised groups to benefit from the project activities and outputs; and (v) prepare design measures to achieve inclusive development outcomes during implementation. The preparation of the PSA should also address issues on gender, stakeholder participation, social safeguards and other social risks.

6. It is a policy requirement of ADB that all investment projects should seek to be socially inclusive, equitable and sustainable (ADB Handbook on Poverty and Social Analysis, 2012). These three objectives can or should be achieved in an urban water supply project by being: (i) equitable in the form of geographic location in poor and/or vulnerable hot spot areas (e.g. development of new water sources); (ii) inclusive in terms of access to water supply infrastructure (e.g. tariff structures and connection subsidies); and (iii) sustainable (e.g. local operation and management of facilities and inclusion of stakeholders in urban water sector development strategy and planning processes).

7. The scale and extent to which these three objectives could be achieved depends on the nature, technical design and purpose of the investment project, its scope and level of funding and the socio-economic situation and needs of the affected peoples (APs), indigenous peoples (IPs), source communities and beneficiaries (end users).

8. The findings of this PSGA are reflected in the design and monitoring framework (DMF), summary poverty reduction strategy (SPRSS), and stakeholder communication strategy. Due to the nature and scope of the investment project, an assessment of opportunities for stakeholder participation and gender mainstreaming were deemed limited. Hence, preparation of a participation plan and gender action plan were not warranted.

3. Project Background

9. ADB 2020 lends support to the Cambodian Government's Rectangular Strategy on Growth, Employment, Equity, and Efficiency, Phase III, which provides the overall framework for the development policies to guide long-term sustainable development; and the National Socioeconomic Development Plan 2014-2018 (NSDP) which further details the Rectangular Strategy and gives priority to the development of physical infrastructure including urban water supply. In this connection, the Project will expand and improve the capacity and quality of the water supply systems and provide new connections in nine subproject towns and meet the needs of women and poor households in these areas. The Project supports the ADB's water and sanitation assessment, strategy and roadmap (SASR), country partnership strategy (CPS) and the ADB water operational plan 2011-2020 to improve the efficiency of water services. It will also progress the Cambodian Government's efforts towards its MDG goal to improve water supply access for 80% of the urban population.

10. Investment in the water sector in Cambodia in the last 20 years was centered primarily on Phnom Penh and neglected the other towns and urban areas. Investment in

water supply in the provinces has been slow and the Provincial Public Water Works (PWWs) across Cambodia have suffered.

11. Not all the investments prioritized by MIH will be directly socially inclusive or equitable because they involve upgrading of existing physical water supply and sanitation infrastructure and are not directly targeted at individual household end-users. This review will focus on both water and sanitation issues although it needs to be noted that only a strategy has been prepared for urban sanitation because MIH is not responsible for urban sanitation. However, it is prepared to work with entities in Cambodia, notably the Ministry of Public Works and Transport and local city governments, to ensure that not only improvements to the water supply system but also sanitation improvements in urban areas benefit the residents of the subproject towns and cities.

12. The main report contains specific details of proposed facility improvements but in the context of this specific project there are two subprojects – Stung Treng and Siem Reap – that warrant more attention because they are not simply facility improvements but have been designed to ensure households currently not connected to the existing water supply systems in both cities will have the opportunity to be connected. In Stung Treng, which is the largest of all subprojects (US$13,473,384) and in excess of half the proposed investment project, upwards of 6,600 households will be served and in Siem Reap the second largest of all subprojects (US$7,442,400) upwards of 8,000 households will be served by the investment project. In the other subproject towns and cities – Kampong Cham, Kampot, Kampong Thom, Sihanoukville, Pursat, Stoung and Svay Rieng – there is either currently not the capacity to produce more water using existing facilities or as the SES has demonstrated hitherto unserved households have stated they can find other sources of water.

13. Nevertheless, the investments facilitate an enabling environment whereby synergies with existing investments or planned investments targeted at individual household end-users and other end-users (e.g., hospitals and schools and small and medium enterprises) will or should benefit from the investment. Moreover, under MIH tutelage the Phnom Penh Water Supply Authority (PPWSA) has institutionalized a program to subsidize domestic water connections to low-income households, known as the Water Supply for Poor Program, for which it has received widespread international acclaim. This is consistent with Cambodia's 2003 National Policy on Water Supply and Sanitation (specifically clean water supply for provinces, cities and towns in Cambodia). In Stung Treng and Siem Reap MIH has agreed that households will not be required to pay for household water supply connections but this report also identifies criteria based on a range of poverty and social indicators that would be utilized of households were required to pay for these connections.

14. Hence stakeholders in this Project will include all existing and potential end-users, including especially poorer and more vulnerable groups such as female-headed households and other socially and economically disadvantaged households such as households with higher dependency ratios or households with economically active members whose income generation potential is limited by physical or other impediments. Although as argued above the beneficiaries of this specific Project will be restricted to Stung Treng and Siem Reap.

15. It is a requirement of the ADB that the investments for this Project be socially inclusive, equitable and sustainable. The ADB argues these three objectives can or should be achieved in a project of this nature by (a) equitable in the form of geographic location in poor and/or vulnerable hot spot areas (development of new water sources); (b) inclusive can be with respect to terms of access to water supply infrastructure (tariff structures and connection subsidies); and, (c) sustainable (local O&M management of facilities and the inclusion of stakeholders in urban water sector development strategy/planning processes). It can be argued that not all local MIH participants in the Inception Workshop understood these social development issues in a very comprehensive manner and more work with MIH on

these issues is important although it is an iterative process and MIH's understanding will not be enhanced overnight. However, by the time of the Interim Workshop local MIH participants demonstrated a better understanding of these social development issues.

10. A stakeholder analysis specific to a project of this nature identified key stakeholder groups, their interest with respect to proposed project interventions, and understand how they perceive the problems and issues which the project design proposes to address. It can be noted that these nine towns have some socio-economic characteristics in common (all have some female-headed households and other vulnerable households) but towns (cities) such as Siem Reap, Kampong Cham and Kampot are economically more advanced and socially dynamic than towns such as Kampong Thom, Stung Treng, Stoung, Pursat and Svay Rieng.

11. A Stakeholder Communication Strategy for the Project has been developed that focuses on the key messages to be disseminated to each key stakeholder group to ensure they are well informed about the aspects of the project that are of interest to them and that they are effectively engaged and will meaningfully contribute to the Project. It is being conducted in accordance with the ADB's 2011 Public Communications Policy and 1998 Gender and Development Policy.

12. At the time of the Inception Workshop it was planned that this strategy would be further refined when the environmental and social safeguard specialists together with the social development specialists facilitate stakeholder consultations in each of the towns and cities considered priorities for this Project and for which full Feasibility Assessment Reports will be prepared additionally utilizing the ADB's 2009 SPS. While it was understood there would be some different issues that the safeguard specialists need to raise with stakeholders such activities would take place in the context of jointly planned and facilitated consultations. The Environmental Specialist opted for larger-scale public meetings although some smaller meetings, notably workshops, were also facilitated so that stakeholder's voices could be more effectively heard. The Resettlement Specialist explained ADB policy in relation to land acquisition and involuntary resettlement that will not only be targeted at Affected Peoples but also other stakeholders at the sub-project level. The Social Development Specialist has adopted a variety of tools and techniques as explained in the PP Plan. However, the extant issue for all specialists is the degree of consultation and participation and the aim should not simply be to share information.

13. There were inadequate resources to undertake such consultations with disparate groups of stakeholders in the towns where only limited Feasibility Assessment Reports will be prepared by the TA Team. Nevertheless the FGDs that were facilitated for the four subprojects for which FARs have been designed can serve as exemplars for other modes of financing in the future including the proposed ADB sector loan.

4. Basic Water Supply and Sanitation Facilities

14. To enable an overview of water supply and sanitation facilities in at least the four subproject towns, Cambodia has a Commune Database that contains information on water supply and sanitation facilities. It was initially prepared in 2008 but and the latest data provided below was compiled in 2011 but presented as 2012 data. However, it is very useful source of information because most database specialists in Cambodia with an understanding of official databases argue this database is generally more reliable than other databases that exist and it is the database that typically providers of ODA feel comfortable with using to inform their own analyses. **Table 1** contains information on sources of potable water from each of the four subproject towns:

Table 1: Sources of Household Potable Water

Name of City	Existing WSA	Pump Wells	Open Wells	Dug Ponds	Rainwater Storage	Natural Sources (river, lake, pond)
Stung Treng	35.3	18.0	14.9	0.4	6.6	26.8
Siem Reap	18.4	70.6	8.5	nil	0.2	2.0
Kampong Cham	70.6	8.7	10.2	nil	0.3	10.0
Svay Rieng	15.6	81.2	3.0	nil	0.0	0.0

Source: Commune Databases 2012

15. From the above table it can be seen that only Kampong Cham has a quite high coverage and Svay Rieng and Siem Reap a very low coverage. The project will expand the network system in Stung Treng and Siem Reap but not Svay Rieng.

16. **Table 2** contains uses the Commune Database to quantify drinking water sources during the dry season, principal means utilized for rendering water potable, and access to water sources:

Table 2: Dry Season Water Sources, Means of Purification and Access to Water Sources

Name of City	Water from Clean Sources	Water from Unclean Sources	Water filtered before Drinking	Water boiled before Drinking	Domestic water source or within 150 meters	Water source in excess of 150 meters from home
Stung Treng	53.1	46.9	18.5	81.5	65.0	35.0
Siem Reap	87.3	12.7	22.7	77.3	92.8	7.2
Kampong Cham	76..7	23.3	28.2	71.8	69.3	7.9
Svay Rieng	97.4	4.6	36.7	54.3	98.2	1.8

Source: Commune Databases 2012

17. What the commune database does not provide is gender disaggregated data especially in relation to whom in the household collects water from distances greater than 150 meters but the SES provides such data based on interviews with households. This is reflected in the following table:

Table 3: Gender of Household Members Collecting Water

Name of City	Male	Female	Male and Female	All Household Members
Stung Treng	60.0	36.0	04.0	Nil
Siem Reap	54.0	08.0	38.0	Nil
Kampong Cham	20.0	04.0	08.0	68.8
Svay Rieng	16.0	28.0	56.0	Nil

Source: Socioeconomic Survey, PPTA, June and July 2013

18. The data provided by the SES is quite difficult to accept based on empirical observation by the PPTA Social Development Specialists and also from other studies as to who is primarily responsible for collecting water in Cambodia although admittedly most of these studies have been conducted in rural Cambodia. It is correct that significant numbers of households collect water via the use of a motorcycle (households not owning at least one motorcycle in urban Cambodia are generally considered to be poor) and it is largely males that ride these motorcycles. However, it has to be remembered that the SES data is derived from interviews with household heads and males being interviewed when they understand the nature and purpose of the question are likely to respond that they are largely

responsible. Cambodian men largely accept that it is an onerous activity to collect water on a daily basis and seek to avoid giving outsiders the impression that men are wanton in this respect.

19. The SES also gathered data on household-based sanitation facilities even though the PGSA focuses on a broader concept of sanitation than the SES it is useful to highlight what data is of relevance to the PGSA in **Table 4**.

Table 4: Household Sanitation Facilities

Name of City	Household Latrine of All Types	No Household Latrine and Typical Non-Use	Septic Tank for HH with Latrines
Stung Treng	63.3	36.7	71.1
Siem Reap	63.6	36.4	92.3
Kampong Cham	90.6	09.4	22.0
Svay Rieng	65.5	34.5	37.7

Source: Commune Database, 2012 and Socioeconomic Survey, PPTA, June and July 2013

20. Of the households with latrines some use pit latrines, which while better than nothing, are generally not that satisfactory and some households also use the latrines belonging to their neighbors that in some instances are likely to be close or distant kindred. However, households that do not use latrines (and over one-third of households in Stung Treng, Siem Reap and Svay Rieng) typically household members defecate in wooded areas in close proximity to the house or in the garden.

21. While there is no reliable health data intuitively people are healthier in Kampong Cham than the other three cities as a result of these household sanitation facilities and it is generally accepted that households with access to a latrine (with the exception of pit latrines) are generally better off than other households and less likely to be living in poverty. Hence in the context of poverty indicators it is not simply whether a household has access to potable drinking water but also a household latrine.

5. Sources of Livelihood

22. The SES data enables a comparison of sources of livelihoods for the four cities and is reflected in **Table 5.**

Table 5: Sources of Livelihood

	Stung Treng			Siem Reap			Kampong Cham			Svay Rieng		
	High Income HH	Medium Income HH	Low Income HH	High Income HH	Medium Income HH	Low Income HH	High Income HH	Medium Income HH	Low Income HH	High Income HH	Medium Income HH	Low Income HH
Wages and Salaries	30.7	25.0	38.4	48.0	76.3	64.2	36.2	28.9	41.3	30.7	25.0	38.4
Pensions and Allowances	-	0.7	0.1	-	1.8	-	1.2	-	2.1	-	0.7	0.1
Income from Cash Crops	2.3	3.0	7.7	-	-	0.2	3.8	3.8	3.3	2.3	3.0	7.7
Sale of Livestock and Related Products	25.6	2.7	5.8	-	-	-		6.1	1.2	25.6	2.7	5.8
Sale of Fish Catch	0.8	2.4	0.4	-	-	3.3	3.1	11.9	4.7	0.8	2.4	0.4
Provision of Transport Services	-	24.3	1.2	22.2	12.4	5.5	7.7	7.7	1.6	-	24.3	1.2
Provision of Other Services	7.3	-	-	3.8	-	3.9	-	-	4.2	7.3	-	-
Sale of Processed Goods	5.5	-	0.2	16.0	7.1	5.2	-	10.1	2.8	5.5	-	0.2
Small and Medium Business Enterprises	10.1	35.2	8.7	-	-	2.7	14.7	18.8	10.7	10.1	36.2	8.7
Inward Remittances	-	1.9	0.2	-	-	2.0	1.5	-	5.1	-	1.9	0.2
Other	17.8	4.9	37.4	10.0	2.4	14.1	31.7	12.7	23.0	17.8	4.9	37.4

Source: Socioeconomic Survey, PPTA, June and July 2013

23. The table illustrates that both Stung Treng and Svay Rieng are more rural in nature in that agricultural-related livelihoods are quite important especially for high income households but for less well-off households that are not living in poverty (the medium income households that are discussed in more detail when the analysis shifts to poverty in the project) they generally have more income-generation opportunities than low income households. This is hardly surprising because households with diversified livelihoods are less likely to be living in poverty or subject to the vulnerabilities of relying on one or two sources of livelihood activity.

6. Quality of Built Environment, Use of Appliances and Motorized Transport

24. The four cities vary in the quality of the built environment with Siem Reap standing out because it is an international tourist destination with a very high quality built environment but very few of the households that will benefit from this project reside in such salubrious environments. However, to develop a more sophisticated profile of households the PSGA now briefly focuses on the built environment, what appliances are being used, and access to motorized transport. This profile is represented in **Table 6.**

Table 6: Physical Quality of Life Indicators

Name of City	House Constructed with Permanent Building Materials	Adequate Household Furniture (tables, chairs, lounge suite, beds and storage space)	Mobile Phone Used on a Regular Basis	Electricity supplied at least periodically each day	Motorized Transport (motor-cycle, car or truck or 4WD or 2WD tractor)
Stung Treng	84.1	43.7	85.3	58.9	21.8
Siem Reap	77.9	66.8	93.7	88.4	30.5
Kampong Cham	69.5	58.9	95.8	82.1	45.7
Svay Rieng	81.0	80.0	89.5	90.5	22.3

Source: Extracted from Socioeconomic Survey, PPTA, June and July 2013

25. It can be noted here that even though Stung Treng has a greater incidence of poverty than for instance Svay Rieng because it is located in that region of Cambodia where until very recently even poor householders could build houses with high quality timber they could freely extract from forested areas this option has not been available for a long time in the other three subproject cities.

26. The SES does not enable this PSGA to argue that householders use mobile phones for social media purposes although during *ad hoc* discussions with some younger householders prior to the recent Cambodian elections it was quite clear younger-urban Cambodians in these four towns use mobile phones for such purposes. However, mobile phones are also used for keeping in touch with household members that might be working abroad and to keep abreast with current market conditions.

27. Connections to electricity are a function of the fact that connections to the electricity grid vary from city to city. Siem Reap is connected to a 66kV TL from Thailand while Svay Rieng are connected to 220kV TL from Vietnam. Stung Treng by way of contrast relies on local connections.

28. Motorized transport when all forms are aggregated indicate relatively low ownership, especially in the absence of reliable public transport but if only ownership of motorcycles is considered 66.3% of households in Stung Treng own at least one motorcycle, 76.8% in Siem Reap, 78.9% in Kampong Cham and 74.7% in Svay Rieng. The small numbers that own

cars (about 12%) in each of the subproject cities are generally from higher-income households.

7. Education and Literacy

29. Basic literacy rates (capacity to read and write basic Khmer) for females varies from a low of 57.9% in Stung Treng to 67.3% in Siem Reap, 72.6% in Svay Rieng and 74.4% in Kampong Cham. The total adult literacy rate varies from a low of 76.8% in Stung Treng, to 77.8% in Siem Reap, 85.2% in Svay Rieng and 86.3% in Kampong Cham. All these literacy statistics indicate literacy levels below UNICEF's 2008 estimate that 90.4% of Cambodia's urban population was literate although perhaps this estimate is conflated because Phnom Penh (the primate city in Cambodia with a population in excess of 1.75 million) is included in the overall estimates. However, as most young people have attended primary and lower secondary school if under the age of 25 and over 12 irrespective of gender they are literate in Khmer.

30. The SES provides data on the highest educational level of adult household members that were surveyed in each of the four cities. **Table 7** provides comparative data with female educational level in brackets:

Table 7: Highest Educational Level of Household Members

Name of City	No Formal Schooling	Completed Primary School	Completed Lower Secondary Schooling	Studied to Matriculation Level	Post Secondary Certificate, Diploma or Degree
Stung Treng	23.2 (36.5)	55.8 (54.3)	16.8 (08.2)	04.2 (01.0)	Nil (Nil)
Siem Reap	17.0 (22.3)	38.0 (55.0	22.0 (19.5)	03.0 (02.0)	02.9 (01.2)
Kampong Cham	14.7 (19.2)	32.6 (48.1)	37.9 (25.6)	10.5 (05.0)	04.2 (02.1)
Svay Rieng	08.4 (16.2)	48.4 (54.9)	25.2 (18.1)	15.7 (10.0)	02.1 (00.8)

Source: Socioeconomic Survey, PPTA, June and July 2013

31. It can be seen from the above table that males are more likely to (a) attend school; (b) stay at school to complete matriculation; and, (c) participate in higher education. Gender inequality is clearly manifested in educational participation rates (not necessarily at the primary school level) but at the secondary and post-secondary level. There are also quite high non-participation rates but it has to be remembered during the Khmer Rouge period schools were closed and in the immediate post Khmer Rouge period many people of school age were either denied schooling simply because there were neither the teachers or the classrooms or were required to work in rural areas to ensure a modicum of food security after the disastrous Khmer Rouge period where in excess of one million Cambodians died from starvation.

8. Social Development Issues

32. The TOR states that a Public Perception Survey to identify public problems and development priorities will be undertaken. Initially this was thought unrealistic because of the narrative used in the original TOR but after discussions with the ADB the focus will be on affordability and willingness to pay dimensions (as pointed out above MIH together with UNHABITAT has provided some useful data). The FGD facilitated and reported on in this

report and as a separate appendix is the empirical basis of this Survey, noting that qualitative rather than quantitative approaches have been utilized.

33. The key issue was how much are end-users, especially poorer and more vulnerable consumers, able and willing to pay for such improvements. It is here that pro-poor considerations such as free household connections for water supply and an incremental approach to the construction of supply tariffs have been adequately analyzed by the PPTA and the conclusion is that where possible and practicable MIH is going to provide 100% subsidised household connections to all poor households and female headed households with high dependency ratios. The ADB's 2004 Enhanced Poverty Reduction Strategy has served as the overall guiding approach and methodological approaches consistent with the 2012 Handbook on Poverty and Social Analysis will be utilized.

34. However, the emphasis has needed to be on a demand-driven rather than a supply-side approach to such pro-poor approaches. Such issues were reinforced by the ADB in its comments on the Inception Report. Qualitative data to support this analysis has been derived from the SES that was undertaken in June prior to Cambodia's 2013 elections while qualitative data was derived from the range of methods embodied in the FGDs and Key Informant Interviews.

9. Poverty Related Issues

35. Income-related poverty data in Cambodia like most official statistical data is not wholly adequate and certainly not disaggregated sufficiently for a project of this nature. According to the National Poverty Line Cambodia's poverty in 2007 was 30.1% and according to the international poverty line (PPP of US$1.25) in 2008, 22.8% of Cambodia's population lived on less than US$1.25 per day per capita. If the Project utilizes the latter indicator the typical urban household of 5.2 persons would require (in PPP terms) US$6.5 per day, US$195 per 30 day calendar month or US$2,340 per annum. World Bank estimates for 2007 and 2009 (latest data available in Poverty and Equity Databank and PovcalNet) show the poverty headcount at US$1.25 (PPP) in 2007 was 22.8% and 18.6% in 2009. The same data for US$2 (PPP) was 60.1% and 49.5%, US$2.50 (PPP) was 71.3% and 64.5%; US$4 (PPP) 87.3% and 86.4%; and, US$5 (PPP) 91.7% and 91.8% respectively. Based on the SES, **Table 8** captures this data for the four subproject urban areas:

Table 8 – Households by Per Capita, Per Day Income Level (PPP)

	Under US$1.25 Per Capita, Per Day	Under US$2.00 Per Capita, Per Day	Under US$2.50 Per Capita, Per Day	Under US$4.00 Per Capita, Per Day	Under US$5.00 Per Capita, Per Day	Over US$5.00 Per Capita, Per Day
Stung Treng	45.2	15.7	7.3	18.9	10.1	2.8
Siem Reap	38.9	20.0	8.4	20.0	4.2	8.5
Kampong Cham	29.4	15.7	18.9	19.4	5.2	9.4
Svay Rieng	25.4	15.7	7.3	28.9	5.9	16.8

Source: Socio-Economic Survey, PPTA, July 2013

36. Poverty related inequality in Cambodia as reflected in the GINI index was 40.5 in 2008 and 39.4 in 2010. The richest 20% of the population possessed 46.8% of wealth in 2008 and 44.4% in 2010 and poorest 20% possessed 8% in 2008 and 7.9% of wealth in 2010. This decline in wealth of the poorest 20% is similar to Vietnam and Lao PDR.

37. Of course the terrain in which inequality has been growing in Cambodia is more complex than can be argued in this PSGA because there are a whole range of issues some of which are related to poor governance and very limited transparency and others to the

specific nature of Cambodia's political economy (for instance economic land concessions that have resulted in the dispossession of poorer, less well-connected households, a garment assembly industry that overshadows most other forms of non-agricultural based employment and an over-reliance on ODA that is not necessarily benefiting those groups it is intended for) that would need to be analyzed. The underlying reality is and one that is typical of most developing economies is that some towns and cities fare better than others and generally speaking all towns and cities benefit to a greater extent than the rural hinterland. And of course in any urban context there are spatial and infrastructural inequalities as the existing state of the water supply systems indicate.

38. However, there is a commune data base prepared by the GOC that is of considerable use in this analysis of urban poverty in Cambodia. Below is a table with 2012 poverty estimates for each of the subproject provinces (and Stoung which is a district in Kampong Thom). This analysis highlights this official data and then compares it with the data gleaned from the SES to provide a better account of quantifiable indices of poverty.

Table 9 – Poverty Data by Subproject Province

Name of Province	Provincial Poverty Rate 2012	Urban Poverty Rate 2012	Lowest Urban Poverty Rate 2012	Highest Urban Poverty Rate 2012
Stung Treng	36.8	21.3	06.8	31.0
Siem Reap	28.8	15.4	02.7	38.3
Svay Rieng	17.4	08.2	00.0	13.3
Kampong Cham	20.4	00.9	00.0	02.6
Kampong Thom	29.1	16.8	02.3	26.6
Pursat	27.8	19.0	09.9	32.2
Kampot	20.4	06.1	00.0	16.8
Sihanoukville	15.6	05.7	00.0	23.7
Stoung (KTH)	Xxx	30.0	15.7	41.0

Source: Kingdom of Cambodia (2012), Poverty Reduction Based on Commune Database

39. The highest urban poverty rate is in Stung Treng City/Town and the Project has demonstrated its capacity to target the poorest of the subprojects. Siem Reap is only the fourth poorest of subproject cities but its poorest sangkat (Chong Kneas) is the poorest sangkat in Cambodia according to GOC data. Households in both the poorest sangkat of Stung Treng City (Sammakei) and Siem Reap City will be offered the opportunity to connect free of charge to the extended water supply network.

39. The SES undertaken for the PPTA does not exactly mirror the data provided either by the GOC or WB estimates but it is grounded in updated empirical data and household income and expenditure for high, medium and low income households in each of the four subproject cities that are currently outside the serviced area is provided in **Table 10**.

Table 10: Average Household Income and Expenditure

	INCOME			EXPENDITURE		
	HIGH	AVERAGE	LOW	HIGH	AVERAGE	LOW
Stung Treng	5,380	3,282	1,152	3,294	2,484	943
Siem Reap	12,000	5,064	1,825	5,988	3,125	1,254
Kampong Cham	7,780	3,907	1,903	5,883	3,096	1,707
Svay Rieng	16,501	7,409	2,170	4,617	2,866	1,892

Source: Socio-Economic Survey, PPTA, June 2013

40. The SES corroborates other databases that Stung Treng has the highest incidence of urban poverty and the lowest household incomes and expenditures in all three categories.

However, there are some necessary explanations that need to be made for the other three cities to render the analysis more cogent.

41. Svay Rieng City has a higher poverty incidence than Kampong Cham but because of its close proximity to Vietnam and ability to leverage cross-border links directly to Ho Chi Minh City average household incomes are generally way in excess of Kampong Cham. However, Kampong Cham has a lower urban poverty rate because there are more income-generation opportunities for low income households than in Svay Rieng. Siem Reap City has a considerably higher urban poverty rate than Kampong Cham but high and average income households are able to benefit from tourism in Siem Reap. Last year in excess of 2 million foreign tourists visited Siem Reap (home of the famed Angkor temple complex). Nevertheless, poorer households in Siem Reap City without the necessary requisite skills (ability to provide goods and services to tourists) and experiencing a diminishing community resource base by way of declining fish stocks do not fare very well. Yet all households irrespective of income according to the SES earn more than they spend.

42. Using the SES data it is also possible to estimate the percentage of households with per capita incomes of less than US$2.50 per capita per day (bare PPP minimum to be not living in poverty in urban Cambodia) and the percentage of households with per capita incomes in excess of US$2.50 per capita per day as follows: Stung Treng (65.2% below US$2.50); Siem Reap (52.1% below US$2.50), Kampong Cham (32.5% below US$2.50) and Svay Rieng (37.2% below US$2.50). Unfortunately the sample size is not large enough to accept the data as being adequately robust. Nevertheless, it does suggest that even in urban Cambodia there are a significant percentage of the urban population that while not poor by either international poverty levels at the lowest level or indeed the national poverty line are not especially well-off. This observation belies the everyday manifestations of conspicuous consumption (relatively expensive luxury motor vehicles, quite salubrious housing, and well-stocked up-market shopping centers) in cities such as Siem Reap and to a lesser extent Kampong Cham.

43. The SES ranked the socioeconomic status of respondents based on the quality of housing, which is actually quite a good indicator. The rankings for each of the four cities are found in **Table 11.**

Table 11: Poor and Non-Poor Ranking

Name of City	Extreme Poverty	Relatively Poor	Non-Poor	High Income
Stung Treng	1.1	61.1	23.2	14.7
Siem Reap	1.0	44.0	44.0	11.0
Kampong Cham	1.0	54.7	32.6	11.6
Svay Rieng	2.1	60.0	24.2	13.7

Source: Socio-Economic Survey, PPTA, July 2013

44. Explanations for being poor according to the SES are also interesting and should be factored into the analysis because they provide at least a partial link to why improved water and sanitation facilities can lead at least to better health outcomes. **Table 12** illustrates these explanations.

Table 12: Householder's Explanations for Being Poor

Name of City	Food Shortage	No Agricultural Land	Adults with Poor Health	No Livestock	Poor Housing or Lack of Housing	Insufficient Financial Resources	Lack of Access to Productive Investments	Multiple (high dependency, cost of living)
Stung Treng	71.6	63.2	18.9	15.8	68.4	52.6	06.3	04.2
Siem Reap	79.0	38.0	39.0	03.0	65.0	56.0	18.0	Xx
Kampong Cham	35.8	54.7	54.7	21.1	20.0	66.3	37.9	09.5
Svay Rieng	20.0	50.5	27.4	14.7	24.2	75.8	61.1	15.8

Source: Socio-Economic Survey, PPTA, July 2013

45. Such explanations are not that surprising and are broadly consistent with explanations that were provided during the 2001 Participatory Poverty Assessment in Cambodia financed by the ADB. In the context of this specific project the key explanations lie are linked to adults with poor health; poor housing or lack of housing and insufficient financial resources.

46. The SES data for non-serviced areas however shows that in Stung Treng over the last eleven days before the actual survey three households had a member that had to be treated for quite serious diarrhea, one each for more serious amoebic dysentery, typhoid fever, and scabies, three households had at least one member that had to be treated for gastroenteritis, and two households at least one member that had to be treated for dengue fever. Based on the SES some 22% of households required treatment for one ailment or another linked to problematic water supply and sanitation. In Siem Reap members of three households over the corresponding period had to be treated for quite serious diarrhea, which of course is a reflection again of problematic access to water and poor sanitation. However, at the time of the SES this represented only 3.2% of households. In Kampong Cham the SES found that only 6% of households had been affected by a waterborne disease over the past 12 months prior to the SES, which appears quite low given that an earlier epidemiological study undertaken by the Ministry of Health indicated that in excess of 15% of households in Kampong Cham required medical treatment for waterborne diseases over the preceding 12 months. In Svay Rieng in the eleven days leading up to the SES members from three households were treated for diarrhea, from two households for typhoid fever and one household for gastroenteritis. This constitutes 12% of all households surveyed.

47. The SES argues that in many instances there is no clear nexus between reported illnesses and poor quality water but any public health analysis is generally able to demonstrate there is a nexus between poor water quality, unsound hygiene practices and lack of sanitation facilities. This is why any project that addresses improved access to water also needs to link the project with improved access to sanitation facilities.

48. While it is quite clear that urban households throughout Cambodia are less likely to be poor than rural households but the latter often have a safety net through close and distant kindred that many urban households lack. However, there is a difference between poorer urban households that retain organic links with their rural kindred and who might benefit from relationships of reciprocity (e.g. un-milled rice provided for urban household consumption in exchange for school-aged children residing with urban relatives to attend high school) and those households who have either severed such links or lacked them in the first instance. There is also an increasing incidence of Cambodians working in either Thailand (in excess of 500,000 documented workers but perhaps upwards of 1,000,000 on a seasonal basis) and Vietnam (especially from border provinces such as Svay Rieng) that must invariably have some impact on the poverty and social analysis Unfortunately the SES was not able to shed much light on these issues although intuitively they are issues that cannot be ignored.

49. There are other proxies that might be used to develop a more nuanced analysis of poverty in the Project towns. Some of these proxies could include: (i) type of housing construction materials used; (ii) existing state of water and electricity supply and sanitation facilities; (iii) current attendance at high school of female students; (iv) nature of income generation activities; and, (v) ownership of motorized transport. Proxies such as ownership of and use of mobile phones are not very useful because nearly every household has at least one mobile phone. In a similar manner perhaps ownership of a laptop computer or internet connectivity might not be especially relevant although possibly in towns such as Siem Reap, Battambang and Preah Sihanouk even poorer households might use internet cafes to a greater extent than in other towns. The problem is that official databases for the most part do not enable the Project to quantify such possible changes (e.g., the official Commune Databases).

50. Consideration was initially being given to using criteria that the PPWSA uses to subsidize domestic water supply connections to low-income residents in Phnom Penh. PPWSA uses the following criteria: (i) household status (e.g., high dependency ratio or adult members with irregular sources of income); (ii) housing conditions (e.g., permanent versus temporary construction materials or not connected to electricity supply network); assets (e.g., lack of color TV, motorized transport or cash savings); (iv) access to economic assets (e.g. indebtedness to meet daily household consumption needs); and, access to social assets (e.g., illiteracy of adult household members or children unable to attend school). Discussions were had with MIH to assess whether similar criteria or criteria modified to meet the somewhat different socio-economic differences of smaller Cambodian towns and cities. For instance intuitively it might be argued that households with members speaking more than one language (e.g. in Svay Rieng or Kampong Cham being able to also speak Vietnamese is likely to signify a household that is not poor because Vietnamese is also a language of commerce whereas in Siem Reap being able to communicate in English has obvious commercial advantages although of course the key non-Cambodian language for commercial purposes is Chinese and only then followed by English.

51. Given MIH's agreement to support the full cost of household connections in both Stung Treng and Siem Reap it might appear that any analysis of ability and willingness to pay is now somewhat academic. However, it is one issue to secure water supply connections free-of-charge and quite another issue to assess whether newly connected consumers will choose to pay for water consumed on an ongoing basis. There is also an argument to be made that if households can afford to pay for water supply connections, even if partly subsidized, then they are more likely to pay for the continued supply of water than use other sources free-of-charge when they are accessible and thereby reducing the revenue base of the water supply entity and perhaps rendering its operations non-sustainable in the long-run (similar arguments are often used as to why household latrines should never be supplied free-of-charge). To more clearly understand this issue it is necessary to consider both the quantitative data provided by the SES and the qualitative data that can be extracted from the FGD.

52. **Table 13** provides reasons why currently unserved households do not wish to connect to an expanded or new water supply system:

Table 13 – Reasons for Not Wishing to Be Connected

Name of City	Percentage of Unserved Households	Connection Fee Too High	Connection Fee and Monthly Tariff Too High	Non-Ownership of House	Existing Supply Source Adequate Quantity and Quality
Stung Treng	40.0	40.0	50.0	10.0	Xxx
Siem Reap	66.0	36.3	6.0	36.3	21.4
Kampong Cham	30.0	Xxx	100.0	Xxx	Xxx
Svay Rieng	24.0	40.0	60.0	Xxx	Xxx

Source: Derived from SES, PPTA, July 2013

53. It is clear from the above table that many of these unserved households state they cannot afford to connect to the existing water supply system or to one that would be upgraded and expanded which provides a cogent case for household water supply connections to be subsidized or preferably provided free-of-charge. However, the above table also indicates it is not simply an issue of how much the household water supply connection would cost but also the monthly tariff and in the case of Siem Reap (surprisingly it is argued) over one-fifth of households have access to existing sources both adequate in quantity and quality. It is argued here that

unserved households need to be more closely surveyed on this issue during project implementation.

54. The SES then focused on willingness to connect and pay water to be supplied as a result of the project and **Table 14** provides this data:

Table 14 – Willingness to Pay Connection and Current Monthly Tariff (KHR)

Name of City	Average Household Size	Amount Added to Monthly Bill	Average Monthly Bill	Tariff (Per Cubic Meter)	Current Connection Fee
Stung Treng	5.36	xxx	15,000	1,500	360,000
Siem Reap	5.13	xxx	15,000	1,500	510,000
Kampong Cham	4.50	xxx	5,500	500	440,000
Svay Rieng	4.77	xxx	12,000	1,200	411,700

Source: Derived from SES, PPTA, July 2013

55. However, it needs to be noted here that as per Table xx poorer households state they cannot afford the current connection fee and monthly tariff but of course unless they pay for the monthly tariff the water supply entity will go out of business. The key to the poor paying for water lies in the success story of the PPWSA where all household consumers have experienced a radical improvement in both the quality and quantity of water supplied although it also has to be remembered that even poor consumers in Phnom Penh have higher disposable incomes than poor consumers in provincial cities and towns.

56. The SES then calculated the affordability for low income households to pay based on costs in the existing serviced areas. The results of this analysis are presented in **Table 15.**

Table 15: Affordability to Pay Estimates (Amounts in KHR)

Name of City	Liters per capita consumed daily	Average Residential Tariff	Household Size	Average Monthly Consumption (m3/HH)	Average Monthly Bill	Percentage of Average Monthly Income	Average Monthly HH Income
Stung Treng	62.19	1,500	5.36	10.0	15,000	2.25	665,300
Siem Reap	64.94	1,500	5.13	10.0	15,000	2.47	608,187
Kampong Cham	68.03	500	4.50	10.0	5,500	0.87	634,339
Svay Rieng	69.93	1,200	4.77	10.0	12,000	1.66	723,222

Source: Socio-Economic Survey, PPTA, July 2013

57. The problem with these estimates is that they fall short of WHO recommendations on water consumption for all household needs – drinking, cooking and bathing – of 20 liters per capita per day. For instance in Stung Treng based on an average household size of 5.36 persons it would be necessary to consume 107.2 liters per day which is a 58.08% increase in daily per capita consumption and if extrapolated further the average monthly bill would be KHR 23,712 per household or 3.56% of average monthly income. However, even with this adjusted consumption figure this does not appear to be too much to pay if clean water can be used for domestic purposes. It has to be remembered that clean water is not just for drinking but also cooking and washing (latter important for women who require cleaner water than men for bathing purposes and indicated by all women whether interviewed for the SES or who participated in the FGDs). The issue then becomes one as to whether the tariff is sustainable to enable the water supply entity to cover all maintenance and operation costs without compromising on quantity and quality.

58. As stated above this analysis also relies on the qualitative insights that can be gleaned from the FGDs that were facilitated in each of the four subproject cities targeted for full feasibility studies as per this PPTA. What follows below is a discussion and analysis of the insights generated by the FGDs, noting as is argued throughout this PSGA that there are

some differences between the quantitative data collected via the SES and the qualitative data generated from the FGDs.

59. In Stung Treng all FGD participants were in agreement that the fees for household water supply connection are simply too high (ranging from KHR 280,000 to KHR 360,000) and suggested they could consider paying for the connections if water quality and quantity were very good a fee in the vicinity of KHR 200,000. FGD participants suggested they could provide needed materials (sand and cement) to defray actual costs. However, FGD participants also stated they found the tariff charged by private sector providers of water at KHR 2,500 per cubic meter to be too expensive. The poor in particular said both high connection fees and water consumption fees discourage them from connecting to existing privately-financed water supply systems in Stung Treng (also questions about quality of water supplied although there is the common perception that water supplied by the WSA is also of poor quality). Essentially poorer households would prefer that connections be made free-of-charge and that tariffs be set at the level charged by the WSA.

60. In Siem Reap there were similar arguments made by FGD participants although perhaps mindful of the existing WSA in Siem Reap all FGD participants noted they are only interested in being connected to the existing water supply system (favorable perceptions of it providing good quality water in adequate quantities on a continuous supply basis). Women FGD participants in particular as will be evident from the gender analysis were very vocal in saying they clearly saw the advantages of being connected as it would reduce their drudgery. Interestingly these same women FGD participants also argued even if they were to be provided with connections free-of-charge they would not seek to collect water from other sources during the wet season (still the issue of drudgery and also quality). FGD participants also argued there is no existing revolving fund to support them paying for household connections and if they were forced to pay for connections the project would assist this process greatly if it provided serviceable loans. Despite findings from the SES the FGDs appear to underscore a desire on behalf of unserved households to be connected to the water supply system.

61. In Kampong Cham poorer households also expressed similar sentiments to Stung Treng and Siem Reap FGD participants except they also noted they had multiple sources of supply and would continue to use these sources rather than simply rely on the WSA. However, FGD participants were mostly satisfied with the consumption tariff although when it was suggested they should pay what consumers pay in other urban water supply areas (double and three times what is paid in Kampong Cham) there was somewhat less support. Unlike the other project towns and cities there is a revolving fund that poor households can access to finance water supply and sanitation facilities but the issue here is that if such a fund exists why are not the poor utilizing it more readily? It is argued here that in essence poorer households in Kampong Cham would also expect to be provided with household water supply connections free-of-charge.

62. In Svay Rieng the response of FGD participants is largely similar to the responses of FGD participants in Stung Treng, Siem Reap and Kampong Cham. These FGD participants were also able to observe with the rehabilitation of the existing water supply system both the quantity of water supplied and its quality had improved markedly even though there had been a tariff increase. They also noted that households had been forced to pay upwards of KHR 400,000 per connection, which for households on at least average monthly incomes was acceptable but the poor could only afford KHR 200,000. FGD participants also argued they should receive the same benefits as Kampong Cham and Siem Reap but when it was suggested the tariff might have to be raised the response was if quantity and quality of water supplied were to be enhanced so long as tariff increases were not too great they would be acceptable. But when asked by how much of an increase would they accept the response was unclear.

63. Based on the FGDs it can be argued that all unserved households would prefer if the WSA would pay for household connections rather than households being forced to pay although with a 50% reduction in existing connection fees there appeared to be a consensus that this would be manageable. The extant issue then becomes one as to what is a fair tariff and it is here that FGD participants argue this is also linked to whether water supplied is of adequate quantity and high enough quality. It does need to be noted that unlike electricity households can collect water from sources not dependent on a supply system. This was made perfectly clear in the context of Kampong Cham but even *ad hoc* discussions the PPTA Consultants had with poorer households elsewhere suggests this is not an argument unique to Kampong Cham.

64. Another approach to the issue is to look at the priorities identified by households that were surveyed as part of the SES. The table below includes these priorities as reported on in the SES:

10. Affordability of the Water Supply Service.

65. A SES was conducted in July 2013 in Stung Treng, Siem Reap, Kampong Cham and Svay Rieng. The results showed that a majority (40 to 73%) of households are not yet connected to the water supply system and are willing to connect and pay, 22 to 45% cannot afford the connection fee, while only 1 to 3% cannot afford the monthly bills.

Table 16 – Willingness to Connect

Subprojects	Willingness to connect & pay%	Not willing to connect %			Total %
		Cannot afford connection fee	Cannot afford monthly bill	Other reasons	
Kampong Cham	73.3	22.7	1.3	2.7	100
Siem Reap	40.0	45.3	2.7	12.0	100
Stung Treng	66.7	28.0	1.3	4.9	100
Svay Rieng	65.3	30.7	2.7	1.3	100

Source: Socio-economic survey. July 2013

66. The connection fees in the four (4) service areas varied: Stung Treng (KR 200,000), Svay Rieng (KR 411,000), Kampong Cham (KR 440,000), and Siem Reap (KR 517,000). In Kampong Cham and Svay Rieng, UN Habitat subsidized the connection fee for poor households (ID poor 1 and poor 2)6. In Kampong Cham, 600 households were able to connect to the system, and these households now represent about 10% of the PWW's total service connections. According to the Director of Kampong Cham PWW7, these newly connected poor households have been able to pay their monthly water bills. The same is the case in Svay Rieng.

67. There are unlicensed private water supply operators in some of the provincial towns included in the project where there is no public water supply network. In Kampong Cham and Stung Treng, the private operator's domestic water tariff ranges from KR 1,500 to 2,500 per m3, the same tariff as the PWW's or higher. In most cases, the private operator's water quality is considered to be less reliable than the PWW's since no water treatment is done by the private operator (pumped from the river and supplied untreated via low quality PVC piped network). The 6 Ministry of Planning identification systems for poor households. Under the UN Habitat program ID Poor 1 households received 90% subsidy and ID Poor 2 households received 70% subsidy. Kampong Cham, Svay Rieng, Pursat, Kampong Thom. 7 Kampong Cham charges only KR 550 per m3 for the first 10 m3 consumption.

Table 17 – Ranking of Priorities

Name of City	Improved Water Supply	Increased HH Income	HH Food Security	New HH Toilet	Waged Work for HH Members	Better Education for Children	Improved HH Sanitation	More Water for Personal Hygiene	Health Center/Clinic
Stung Treng	1	2	3	9	6	5	8	7	4
Siem Reap	2	1	4	7	5	3	9	7	6
Kampong Cham	1	2	7	4	8	9	3	5	6
Svay Rieng	1	4	3	6	7	9	5	2	8

Source: Socio-Economic Survey, PPTA, July 2013

68. From a project perspective it should be pleasing that improved water supply is either the first or second priority of households interviewed but this prioritization must be viewed with a degree of skepticism because conventional wisdom would dictate that increased household income, full household food security, waged employment for household members and better education for children would rank higher than improved water supply. However, taking a broader perspective and focusing on the livelihood system any household needs to function in all of the issues listed as priorities are likely to be priorities even if improved water supply would be less of a priority than the hitherto mentioned priorities. Hence it is very reasonable to argue that of course an improved water supply for households where the existing water supply system is either problematic or non-existent.

69. The extant question that needs to be answered for all project stakeholders – primary and secondary – is whether this project can contribute to a reduction in poverty and an improvement in living standards of households living in urban Cambodian towns and cities. To put to one side the issue of improved sanitation although of course this is not unimportant, improvements to household water supply that ensure a greater quantity of water coupled with better quality must contribute to both goals. It does not have to be a MDG but the reality is that water is necessary for sustaining livelihoods and where households have problematic access to water they face a situation that is as critical as lack of household food security. The evidence gleaned from the SES and FGDs suggest that lack of water security is a major issue for many households and the lives of all household members would experience both quantitative and qualitative improvements in the physical and social quality of life therefore it is not difficult to justify on poverty grounds how this project meets both the priorities of the GOC and ADB and of course penultimately beneficiary households as well.

11. Gender Issues

70. This Project is a Category 11 Gender Mainstreaming Project (Effective Gender Mainstreaming or EGM), as per *ADB Guidelines for Gender Mainstreaming Categories of ADB Projects* (July 2012). The Project is not focused on gender equality or women's empowerment but is designed to directly improve women's access to basic urban water supply infrastructure (prior to the Inception Workshop it was assumed that urban sanitation would also be focused on in this PPTA and while it will not be focused upon the ADB expects during the Poverty and Social Analysis it can be demonstrated whether a demand exists (intuitively it does) for urban sanitation investments as well. Together with UNHABITAT data has been collected from some of the Project towns and cities (Kampong Cham. Kampong Thom, Pursat and Svay Rieng) that is very useful for this Project (e.g. useful analysis of ability and willingness to pay). The ADB has Guidelines on Incorporating Gender into Urban Water Supply and Sanitation Projects and the matrix from these guidelines has been utilized where considered relevant taking into account that it was designed for rural water supply and sanitation projects.

71. This is a different requirement to those included in the *Safeguard Policy Statement* (2009) relating to the equal payment of compensation money to women, access to income restoration measures, and grievance redress or social protection issues associated with social risks, notably HIV/AIDS and human trafficking. There are a series of requirements specific to EGM that ADB Policy requires and will be undertaken as part of this PPTA.

72. The first requirement is for a social analysis that includes careful consideration of gender issues. Women in Cambodia have some of the highest participation rates as economically active persons in the DMC (in excess of 70%). Traditionally there has been a matrifocal bias in the rural Cambodian kinship system that ensures some status for women. For instance women are considered more effective managers of household finances and

most decisions are made jointly between married couples. However, women are subject to somewhat greater behavioral norms than men, they generally work longer hours than men and their work is accorded lower status (e.g. less physically demanding and of lower value), and they have a less visible public profile than men (e.g. partly explained away by women being generally less well educated than men).

73. Yet over the past two decades significant changes have occurred which have impacted upon women in Cambodian society. With newer non-agricultural based waged employment and other income-generation opportunities becoming available younger rural women have migrated either temporarily or permanently to the more dynamic towns and cities of Cambodia. Therefore it is no longer possible to depict Cambodian women as wholly tradition-bound and unable to transcend traditional gendered relations in Cambodian society. The social analysis for this PPTA will highlight both the constraints and opportunities for women in contemporary urban Cambodian society, noting for instance the contextual differences between a town like Kampong Thom and Siem Reap or Pursat and Svay Rieng.

74. Within this EGM category specific gender design features needs to be included in 50% or more of project outputs and/or components to facilitate and ensure women's participation and access to project benefits. Most of these outputs/components have at least 3 gender design features and targets. Examples of gender inclusive design features specific to this Project might include all female-headed households being provided with free or heavily subsidized connection to the improved water supply system, mechanisms to ensure women's equal representation and participation in decision-making processes and structures related to the design, operation and maintenance of the physical infrastructure (this might include MIME improving its effective staffing profile to ensure women are represented at the higher echelons of corporate decision-making), and provision for hiring women for project-related work (this is explicitly stated in the EMP).

75. Gender targets and performance and monitoring indicators must apply to 50% of project outputs in the DMF. The DMF has ensured that this requirement is met. Similarly a GAP as a linked document to the RRP (as is the SPRSS but this covers both the social and poverty reduction strategy and all actions considered necessary) and based on the social analysis of gender in the project area relevant to a project of this nature and included in the related PAM. In the actual RRP main text there is a discussion on how the Project will contribute to improving women's access to benefits from the Project. The final output relating to gender has been the preparation of a covenant or a condition in the policy matrix to support implementation of the GAP. This final activity should be undertaken by the ADB Staff Team.

76. The challenge for this specific PPTA has been to ensure that other technical specialists understand the ramifications of EGM and what this entails for overall project design. On some projects this proves to be very difficult because some technical specialists refuse or are unable to understand the importance of gender development issues in project design. However, fortunately for projects of this nature there is generally a greater awareness of such issues and this PPTA Team in particular has been sharing ideas with each other both by email and in person in a collegial environment facilitated by the Team Leader. This will continue until the Final Report is accepted. Although it needs to be stressed the GAP has to be practical enough that MIME both nationally and locally is prepared to implement it. In this respect it is argued gender capacity-building assistance for the EA and IAs is very important. This should commence with MIME being prepared to mobilize one or more staff members to assist with the SES and other participatory exercises.

77. A matrix of gender-related issues relevant to urban water supply and sanitation projects and tailored to the specific nature of this PPTA is presented in **Table 18** and is based on a variety of sources both primary (SES and FGD) and secondary sources

(primarily other studies) and is designed to address the concerns of gender analysis for this project:

Table 18: Matrix of Gender Related Issues

Item	Issues
Demographic	Females constitute 51.2% of Cambodia's population and 51% of the urban population in the project towns and cities. Life expectancy for urban Cambodian women is 68 years compared to 62 years for urban Cambodian males although with the end of major armed conflict and other violence-induced deaths the gap is quickly closing. There is greater in-migration to cities such as Siem Reap, Kampong Cham and Sihanoukville where there are more waged employment opportunities than in other project towns. There is limited out-migration from the peri-urban areas of most towns and cities due to the pull factor of both the urban Cambodian economy and the neighboring Thai economy. Smaller numbers of young female workers spend time as domestic workers in Malaysia and a much smaller number in South Korea and Taiwan. Female-headed Households constitute 12.2% of the urban population but it needs to be remembered that FHH are not necessarily vulnerable and the key vulnerability issue is to assess the dependency ratio. FHH where there are at least two household members able to generate income are not generally considered to be vulnerable but as in all contexts where households have either recently moved out of poverty or are in danger of moving back into poverty prolonged illness, loss of employment or even death can render FHH vulnerable. The average household size is just over 5 persons per household although this can vary from a household numbering just 2 people to a household with up to 10 persons. Peri-urban households tend to be of a larger size (in excess of 6 persons) than urban households. It also has to be remembered that households are less likely to be bound by physical kinship ties than in rural Cambodia. In Cambodia it is considered that women should be married before they reach the age of 25 although in rural areas date of marriage is often in the late teens whereas in urban Cambodia some women delay getting married until they are in their late 20s. The gendered issue in Cambodia is that a married woman is not considered a woman until she has given birth to at least one child (no gender preference although most prefer both female and male offspring). Cambodian males by way of contrast are considered males once they have spent a small amount of time as a Buddhist monk.
Economic	Average income levels, the sources of this income, and expenditure patterns have been reported on elsewhere in this PSGA. Urban Cambodian women are able to generate income from a variety of sources that are unavailable to most rural Cambodian women except the latter can often rely on forms of non-monetary exchange embedded in reciprocal relations based on the sharing of resources such as NTFPs, fish, and harvested foodstuffs Typically a married or adult woman will be involved with her husband or other adult men in decisions as to how the household budget is managed. Men generally expect women to manage the household finances and if they are mismanaged even because men might withhold or garner household finances for their own purposes it is women who are generally criticized.

Item	Issues
	Land tenure or rather secure access to urban properties in Cambodia remains a major issue. The GOC has moved in recent times to institutionalize property rights but in urban Cambodia unlike rural Cambodia women are not accorded either the social or legal right to be accorded joint ownership of property. It is easier in urban Cambodia for men to alienate land and buildings than in rural Cambodia where the traditional matrifocal bias of the kinship system where property is inherited through women is still a dominant practice.
Health	The major health related issues that impact specifically on women and girls relate to a very high incidence of diarrhea and to a lesser extent dysentery, which even if not always directly related to the consumption of poor quality water and inadequate sanitation facilities, are often the underlying causes. Over 70% of urban Cambodian households report on an annual basis at least one or more household members experience a moderately serious case of diarrhea that requires some form of medical treatment. Women and pubescent girls are also likely to experience some reproductive tract infections related to the inability to bathe in contexts where privacy and security can be assured. School-age girls also experience some problems attending school, especially with the onset of puberty because many schools do not have either a suitable toilet for female students or if they do are poorly supplied with water. Other water-related illnesses include dengue fever that primarily impacts upon younger children although rates are generally higher in rural villages the peri-urban or urban sangkat. The major gender-related issue is that when either women are ill themselves or are required to be the primary care-giver they are required to work longer hours than normal adding to their already over-loaded domestic burden. Urban Cambodia is relatively well served by public and private health service providers but many women complain that the public sector provides poor service and the private sector charges too much. Poorer urban women are quite disadvantaged because they cannot afford the latter and often treated poorly in the former. The public sector that is responsible for public hygiene programs in neighboring countries (notably Vietnam and Thailand) for the most part performs very poorly and is failing all women irrespective as to their socio-economic background. Cambodia has a pro-natal approach to fertility issues and underlying this approach is “a populate or perish” theme based on Cambodia’s relatively small population vis-à-vis its two larger neighbors. However, urban Cambodian women because of higher education and participation in the paid workforce are less likely to have large families (defined in the Cambodian context as having more than five offspring) than rural Cambodian women. Nevertheless, urban Cambodian women are likely to get pregnant more often than women of a similar status in neighboring countries. Contraception and sterilization are becoming increasingly widely used in curbing excessive population (admittedly from a very high base) but for instance sterilization programs are targeted at women rather than men (argued by men that this diminishes their “manhood”). Women who want to terminate pregnancies can generally arrange such a termination (some of course are unsafe because in Cambodian Buddhism there are strictures against abortion). Food is generally allocated on an equal basis in urban Cambodian households although during cultural and religious festivals of which

Item	Issues
	Cambodia has no shortage women generally prepare the food, men partake of the food prepared, and women and children then eat after men are replete. Although Cambodian culture dictates that while men might get to eat first they also have to be sensitive of those – women and children – who get to eat after them. Domestic violence exists in Cambodia as it does in most societies but gender analysts of Cambodian society expend a good deal of their analytical focus on this issue. The real problems in Cambodia are two-fold. Firstly, Cambodia has never been free of domestic violence and over three decades of internecine warfare did little to arrest this endemic issue. But secondly, and perhaps of more importance is that the courts do not take the issue of domestic violence seriously enough and some Cambodian women (especially higher status women) are able and willing to use males to engage in violent activities (e.g. use of acid to disfigure putative lovers of marital spouses) against women of lesser status.
Education	The literacy rate among urban Cambodian women under the age of 45 is close to 90% which is considerably higher than in peri-urban Cambodian society where only some 70% of women are literate and in rural Cambodian society where less than 60% of women are literate (concept used here to denote both functional literacy and numeracy). Primary school enrolment for females in urban Cambodia is close to 100% and over 90% of those enrolled complete primary schooling. However, less than 20% complete secondary schooling (males: 58%) and fewer than 10% undertake post-secondary studies (males: 25%). Thus it is at the lower secondary level that urban females are likely to drop-out of school but unlike their rural counterparts they are more likely to attend school on a regular basis. Child labor is not a major issue in urban Cambodia, although in better-off women in all urban areas are known to employ younger females – often of school-age – from rural villages to provide a range of housekeeping services. Not all of these young women are grossly exploited but the Cambodian media contains enough references to suggest that life for such young females from the countryside is not very easy.
Status of Women	The Cambodian Constitution of 1993 guarantees the equality of women and men but in reality in the public arena men have more status than women. The latter are less well-represented in national parliament, at the provincial, district, commune and village level although at the commune and district level women are more likely to be represented than at provincial and national level. The dutiful wife who manages household finances and ensures all household members are well looked after is the dominant image in most discourses on male-female relations in Cambodia. Although older women have more status than younger women and to some extent younger men and women from higher socio-economic backgrounds generally have more status than men from lower socio-economic backgrounds irrespective of the latter's age. Typically women have to be demonstrably superior before they are accepted as equals by men. However, the situation is quite fluid and it is necessary to avoid over-generalization of status differences between women and men. In Cambodia since 1993 a significant number of Cambodian women have been able to

Item	Issues
	participate in civil society groups that are capable of challenging institutions more closely aligned with the state.
Gender Roles and Responsibilities	Men are more likely to be employed in the public sector than women and where the latter are employed it is typically in lower level and less well remunerated employment than men. However, with the growth of the private sector, especially FDI employment more than 90% of the workforce is women. Women are more likely to be involved in the informal urban economic sector than men in addition to being responsible for most of the household-based labor. Men in Cambodia claim they undertake the physically difficult and sometimes intellectually challenging activities but the GDOL even in urban Cambodia is more nuanced than has often been reported. There is simply no reason why a project of this nature cannot ensure that women can be involved in project implementation including the provision of waged labor. It can be noted that the Stung Treng WSA has a female director who is a graduate engineer although most of the technical staff are male\Of specific relevance to this project the SES notes that more men than is stated in other studies collect and store water freeing women to do other necessary work. However, in general it is women and young people (girls and boys) that collect water from existing water bodies and are also responsible for storing it and replenishing stocks when they run low. Typically this is a daily activity except for better-off household who can invest in storage tanks. There is a clear separation of traditional roles in Cambodian society and women are mostly responsible for domestic work and looking after the family. Poor water supply & sanitation are gender issues exposing family to health risks and diseases and burdening women's domestic role and family care and increases their 'time poverty'. Despite women being the biggest user of water in the household, they actively participate on community consultations on water but men still control the decision on water supply.
Water Use – Knowledge, Attitudes and Practices	Urban Cambodia women clearly understand water security is an important household priority. Even more so than men these women know that because they generally collect the water and care for those who fall ill as a result of unclean water this is a livelihood issue that cannot be ignored. The SES and FGDs indicate that the availability, quantity and quality of water supplied is generally quite problematic. They are able to compare and contrast the situation in Phnom Penh, which until a decade ago had an extremely poor WSS. In some towns and cities the public WSA provides water but in areas that it cannot serve because it either cannot process sufficient water or the network has not been extended or a combination of both factors the private sector plays a role. It appears that water supplied by the private sector is more costly and not necessarily of adequate quality. However, it is also perceived that the WSA is incapable of ensuring the availability, quantity and quality of water in the areas that it already services. Typically in urban areas outside Phnom Penh water cannot be supplied 24 hours per day and this project is designed to ensure this will be changed. However, women in the project towns and cities would be satisfied if they could have access to water of sufficient quantity and quality for part of the

Item	Issues
	day especially morning and evening). Because of the under-performing WSS there are marked seasonal differences in the availability, quantity and quality of water. For instance in Stung Treng there is plenty of water during the wet season that can be extracted from the Sekong River but it is of poor quality whereas in the dry season even the river is difficult to extract water from but it is of better quality. For women this means they have to expend more effort during the dry season than the wet season. They hope this project will reduce their need to rely on river water during the dry season. PPWSA has very user-friendly customer service agents but the same cannot be argued for other urban WSS. There is little gender awareness among these WSA with the possible exception of Stung Treng but the project can assist each WSA to develop a more customer-friendly approach.
Costs	These have been discussed elsewhere in the PSGA but here it is useful to note that costs per unit vary from WSA to WSA. This is quite understandable because of economies of scale but it also means that women consumers in some project towns and cities pay more for the use of water than in other towns and cities. The extant issue here is should water as a necessary good be priced similarly throughout urban Cambodia.
Water Sources	In the project towns and cities during the wet season households in unserved or underserved areas extract water from rivers (xx.x%), ponds (xx.x%), and rainwater from roofs (xx.x%) and during the dry season from rivers (xx.x%), ponds (x.x%), groundwater wells (x.x%), and water-vendors (x.x%). However, with the onset of climate change the situation is very fluid and without the project there are likely to be problems with seasonal extraction of water for household purposes.
Water Collection and Storage	Better-off households collect water in containers from water-bodies and then transport it to the house by motorcycle (women are also involved but this is where men can also be involved and the fact that men find this easy masks the difference based on gender to collect water). Other households might use hand-pulled carts (more women use this mode than men) while the very poorest of households are likely to simply collect what water a carrier is capable of physically transporting (mostly women and girls and the longer-term physical impacts are apparent). Better off households have invested in storage tanks for water collected but most households during the wet season have earthenware containers to store water captured from downpipes during periods of rain. Better off households with more containers can harvest rainwater for longer periods than other households. These same households are also able to afford better quality storage tanks that enable harvested water or even collected water to be used for a longer period without too much decline in water quality.
Use of Domestic Water	Domestic water is used first and foremost for human consumption. Urban households will boil water of necessary to ensure it is fit for human consumption. In this respect they often differ from rural households that believe boiling water reduces the quality of the water. However, peri-urban households that also keep livestock (varies from city to city) also use such water for their livestock (cattle require more water than either people or other livestock such as pigs and poultry). Households also

Item	Issues
	try and use potable water for cooking purposes because most believe for instance when cooking rice (staple food of choice for all urban households irrespective as to income or ethnicity) water quality is an important consideration. Women also prefer to use domestic water for bathing purposes even if the river is nearby for a range of reasons including personal hygiene, privacy and physical security. But this is not always possible and women have stated this is something they hope the project will enable them to overcome. As noted elsewhere this is a more important priority for women than men.
Dry Season Management	This is more an issue for households in rural areas but even in urban areas it is still an issue. The Stung Treng example cited elsewhere illustrates how households that rely on natural water bodies have to adapt their water management strategy to ensure access to potable water. It is clear that where possible urban households seek to avoid relying on water vendors where they can because purchasing water by this means is quite costly. Some NGOs have attempted to supply small filtered devices to ensure at least some potable water is available during the dry season but for the most part this mode is not favored by urban households: they prefer being connected to the WSS.
Conflicts in Water Distribution	Because this is primarily an urban-based project there appears to be few reported conflicts over water distribution. However, anecdotal evidence indicates that some households attempt to garner what water is available especially during the dry season when water pressure is often very low and sometimes water quality is also very poor.
Community Water Management	WUGs exist in rural Cambodian villages because of the role played by MRD and some NGOs but while NGOs have been active, albeit in very limited contexts in Svay Rieng such management structures are generally non-existent. However, in peri-urban areas of Stung Treng informal community water management organizations exist to ensure there are n conflicts over water extracted from the Sekong River that flows through Stung Treng. It also needs to be noted that such management structures are not relevant to supply contexts where individual households enter into a household-based contract with the local WSA.
Sanitation Knowledge, Attitudes and Practices	Urban Cambodian women are largely responsible for family hygiene education. It is women who teach young children where to defecate and where not to defecate. In peri-urban areas as in rural areas there appears to be a widespread belief that breast-fed infant feces can be disposed of in much the same way as livestock feces (at least cattle) and no attempt is generally made to bury or burn such feces. In recent times many schools have introduced hygiene education into the curriculum and school-aged children are now stating they should wash their hands with soap and water after defecating. The only problem is that schools for the most part have grossly inadequate latrines. Typically then many households will use areas surrounding the house to meet their toilet needs. Usually a small hole is dug in the ground and then on completion is covered. This of course is not possible in more densely populated urban areas (e.g. in the vicinity of the market) and households often share toilets or rely on public facilities: the latter of which are far and few between and where they exist are poorly maintained. Unfortunately Cambodian towns and cities are poorly resourced in this respect and there appears to be no commitment by government at the national or local level to

Item	Issues
	address this issue. It is very difficult to ensure privacy and this is a major issue for women and girls. To ensure privacy women and girls have to place themselves at risk and for instance by early evening many women and girls drink less water to avoid having to go to the toilet during the night. As even many urban Cambodian houses are structured so everyone sleeps in a common room it is not simply a case of women and girls keeping a pot nearby. For older women with less mobility some exceptions are made but to retain a sense of dignity women and girls would like to ensure their privacy and feel disempowered not being able to retain this sense of dignity. Women and men bathe in a variety of locations. Dressed in a sarong that covers their breasts women might bathe in the vicinity of the house whereas men can strip to the waist to bathe. The notion that women should be able to bathe fully unclothed is only possible if they have a bathroom to do so. When women go to the river they can remove their sarong underwater but there are still problems with personal hygiene. Even young girls have to be modest whereas young boys can bathe naked in the river or even around the house. Women are increasingly aware that not being able to bathe properly has an important impact on their personal hygiene and they note that better-off women who can bathe in the privacy of their own bathrooms have better personal hygiene. Human waste is either buried or collected and disposed through burning although some householders conceded that they defecate in the river and then do not have to worry about disposing of it. Cattle feces might be collected and used to fertilize household vegetable gardens but other feces are not typically used as fertilizer. There are no community hygiene responsibilities in any of the urban towns. Service providers are contracted to dispose of publicly-generated waste such as that generated in the markets or after major festivals. People are expected to dispose of their own waste and households with toilets will engage a desludging service provider to dispose of human waste.
Needs, Demands, Perceptions and Priorities	The PSGA indicates there is the need for an improved water supply system in each of the project towns and cities. The analysis has focused on unserved areas but the project also is seeking to improve the availability, quantity and quality of water supplied to existing consumers. That a demand exists is quite obvious although on a seasonal basis it varies from one subproject to the other and there are also some households that are not interested in being connected to the existing water supply system. However, the demand or lack thereof is also linked to perceptions as to whether the project is necessary or not. Men are of course interested in the project but are less likely to emphasize sanitation-based issues than women. There is a willingness to pay, even for individual household connections including payment in-kind such as the supply of sand and cement but the preference is that the project provides household water supply connections free-of-charge. If this is not possible connection fees should be lower (by approximately 50%) although there appears to be few dissenting voices vis-à-vis existing tariff levels. For sanitation facilities (notably the construction of latrines) poorer

Item	Issues
	households cannot afford to finance such facilities from their existing financial resources. They are interested in sanitation improvements but not at the expense of other household priorities.
Participation	There are no legal constraints to women's participation in activities they might consider it useful for them to be involved with. However, as argued above the social constraints are more important. Based on consultations with women they can be supportive of the supply of sand and cement for household water supply connections but are reluctant to volunteer labor for project-related activities because they have less free time than men. Seasonality is not an issue for most women in this project because they are urban-based and do not rely on seasonal agricultural activities. However, they argue there are constraints during the day when they are not available and they need to be consulted at times that are convenient to them rather than project implementation staff. As part of the Stakeholder Engagement Processes utilized during this PPTA (especially FGDs) facilitations occurred at times convenient to women. The Department of Women's Affairs in Stung Treng has prepared a proposal briefing to seek support for its financing for a water and sanitation program that it has been implementing in Stung Treng. This proposal that will be included in the Gender Action Plan for the project as it addresses many of the issues linking water and sanitation.
Project Impact	The general consensus is that the project can only have a positive impact upon all households. It is generally perceived that access to clean water is almost as important as household food security but the issue is people have to pay for food if they do not produce it themselves whereas for water even though the preference is for clean water it is often possible to collect water free-of-charge even if not necessarily fit for human consumption without treatment. Several water vendors state that they will lose a valuable source of income during the dry season but even they concede that having access to clean drinking water is a very positive impact. However, there are some issues as to whether the project should also not address sanitation issues. Having access to clean water but women would like to also have bathrooms that include a toilet to enable them to have greater privacy than they have at present and also to avoid defecation or urination at night time for both security reasons and to avoid attacks by stray dogs or even snake bites.
Organization	This is not a very relevant issue for this project because of the nature of modalities for the supply of water. The purpose of the project is to ensure that existing WSA will be able to provide services of a sustainable nature. However, in the broader systemic context the linkage of public hygiene with household sanitation issues requires a degree of organization that is lacking in urban Cambodian towns and cities. At present the Department of Public Works is responsible for urban sanitation issues but it does not take its role very seriously and as a result there is a very low institutional capacity to oversee effective linkages. The Stung Treng Department of Women's Affairs is very interested in linkages between water and sanitation, partly it might be argued because they have a good working relationship with the female WSA Director but also because DWA is familiar with how the providers of ODA work. Whether this

Item	Issues
	can be replicated in other subproject towns and cities is to be suggested in the GAP prepared for this project. The issue here is whether grant financing can be sought because loan financing of a non-revenue generating activity is likely to be strongly opposed by MIME.

12. Institutional Gender Analysis

78. The institutional gender assessment for the Project (Final Report, Section IV and Appendix 40) identifies the main institutions involved in the Project's planning, implementation, monitoring and reporting and post Project operation and maintenance, and assesses their capacity to carry out these functions and their respective mandates under the Project.

79. In pursuant of this objective, an institutional assessment was carried out on the Executing Agency (EA) and the Implementation Agencies (IAs). In carrying out this assessment, the EA and IAs involved in the nine (9) subprojects were visited and asked to fill questionnaires that addressed the following issues: (i) institutional matters on staff tenure, staff appointment procedures, staff qualifications and experience; (ii) organizational structure reviews of layers of administration and spans of control; (iii) human resource management of staffing numbers, human resource strategies; job descriptions; (iv) financial management on financial reporting (internal and external), performance reporting, accounting system, budgeting and production plan, forecasting, billing and collection procedures; (v) complaints management; and (vi) staff training.

80. The Final Report has proposed a Training and Capacity Building Plan (Appendix 20) to identify and provide for specific staff training needs with a budget of US$1,705,000, which will be covered through a standalone capacity building technical assistance (CDTA), subject to availability of funding. Although, a standalone CDTA it would directly complement the project activities.

81. The intention here, however, is to assess the gender awareness and gender equality policies and practices of the concerned institutions and how they could contribute to addressing any perceived gender disparities and risks.

12.1 Government's Gender Mainstreaming Action Plan: 2006-2010

82. The Government of Cambodia has been promoting gender equality and empowerment in Cambodia since the early 1990s under several International Agreements including CEDAW, various laws including the 1997 Labour Code and various national plans and strategies including the Rectangular Strategy for Growth, Employment, Equity and Efficiency. In 2005, the Cambodia National Council for Women (CNCW) was convened to work closely with the Ministry for Women's Affairs (MOWA) to promote gender mainstreaming and empowerment in the government ministries and departments at the national and provincial levels. A Gender Mainstreaming Action Group (GMAG) is now in place to work with ministries and departments to implement the Gender Mainstreaming Action Plan (GMAP): 2006-2010, that was prepared by MOWA's Technical Working Group on Gender (TWGG). At the provincial, district and commune levels, gender mainstreaming had taken place until December 2006 through SEILA, the RGC's local governance programme for decentralised planning, financing and implementation of development projects in all 24 provinces. Budgets have been set aside at the national and provincial levels to support implementation.

83. The Project's EA and IAs are obliged to comply with the Government's gender mainstreaming policy within the above legal and policy framework. Despite this commitment to promote gender equity and empowerment through increased opportunities for women's employment, implementation in the EA and IAs has been rather slow as evident in the baseline sex disaggregated data on the employment and management gender distribution and ratio in the EA (MIH, DPWS and PMU) and PWWs/PIUs.

12.2 Institutional Employment by Gender

84. The ADB PPTA Mission noted that fewer women than men are working in the EA and IAs/waterworks (0%-26%), and a majority of them are contract staff working as a laboratory technician, administer, cashiers or accountant.

85. Table 18 presents the sex disaggregated employment data for MIH and DPWS and the eight PWWS and SRWSA. With regard to the EA, MIH and DPWS employ 20% and 10% women respectively. The ratio of women employed in the PIUs varies remarkably from zero for Stoung to 26.1% for Kampot (no data was available for Pursat). Out of the nine PIUs, seven (Kampong Thom, Kampot, Kampong Cham, Siem Reap, Pursat, Stung Treng and Svay Rieng) employ around 10% or more women while two PMUs (Sihanoukville and Stoung), employ less than 10%. Four PMUs actually employ 15% or more women and these include Kampot (26.1%), Siem Reap (18.3%), Pursat (21.6%) and Stung Treng (20%).

86. Female participation in management appears to be also very low (0% for five PMUs) although Kampot has 50%, but this is attributed to its small management (two staff only in management and one female effectively accounts for 50%). The available data for men and women employed in management (Table 18) was incomplete with no information available for MIH and Stoung. As for the other organisations, women are represented in the management in Kampot (50%), Stung Treng (20%), and Svay Rieng (16%). However, in Kampong Thom, Sihanoukville, Kampok Cham, Siem Reap, Stoung, and DPWS have zero women in management. In Stung Treng, the only woman in management holds the top position of Director, the only woman director of a water utilities in the country.

Table 19: Public Water Works Employment by Gender: September 2014

Town	Total Employees	Male	% Male	Female	% Female	Management	% Female
Executing Agency (EA)							
MIH	458	367	80.0	91	20.0	-	-
DPWS	20	18	90.0	2	10.0	9-M/0-F[a]	0%
Total EA	478	385	80.0	239	25.0		
Implementing Agencies (IA)							
Kampong Thom	31	28	90.3	3	9.7	6-M/0-F	0%
Kampot	23	17	73.9	6	26.1	4-M/2-F	50%
Sihanoukville	51	47	92.2	4	7.8	6-M/0-F	0%
Kampong Cham	30	27	90	3	10.0	8-M/0-F	0%
SRWSA (Siem Reap)	71	58	81.7	13	18.3	6-M/0-F	0%
Pursat	37	29	78.4	8	21.6	na	na
Stoung	13	13	100	0	0	5-M/0-F	0%
Stung Treng	20	16	80	4	20	5-M/1-F	20%
Svay Rieng	23	20	86.9	3	13.1	6-M/1-F	16%
Total IAs	299	255	72.3	44	14.7		

[a] *At management positions of Director (1), Deputy Director (3), and Chief of Office (5)*
Source:MIH/DPWS/Waterworks

12.3. Contract Employment

87. The Project is envisaged to implement around US$25 million worth of civil works construction in the nine subproject areas which provides an excellent opportunity to promote the employment of locals including women. As far as women are concerned, the opportunity will not only provide them with waged incomes to assist their families, it will also teach them skills and experience for continuous employment in the future. Ironically, women in Cambodia are actively employed in the construction industry where an estimated 40% are employed. However, the bulk of these women are employed mostly in the building construction sector doing mostly manual labour with low involvement in jobs that require technical skills and operation of heavy machinery. Less women are actually employed in construction projects in the urban water sector (estimated to be between 5-10%) which industry experts attribute to the nature of work where less manual labour is employed and the Projects are only short term and not continuous like in building construction.

12.4 Training Needs

88. There are a number of key training needs that are apparent and were identified during the institutional capacity assessment which should also include women. The following is a summary of what are considered to be the key areas that training should focus on: (i) management and supervision; (ii) communication and awareness (customers, community, public relations); (iii) workplace issues (occupational health and safety); (iv) operation and maintenance; (v) asset management; (vi) information technology; (vii) gender Issues; (viii) enforcement of regulations; (ix) workplace knowledge and skills: work processes (monitoring, financial planning, human resource development); and trade skills (mechanical). At least 30% women should be included in these training programs consistent with Government's gender mainstreaming action plan to give women equal employment opportunities.

12.5 Gender Design Measures

89. When assessed against the Government's gender policy commitments, most of the EAs and PWWS/ PIUs still have a long way to go to promote gender equity in employment and management that is to match the organisations are strong on gender equality and equity. In order to redress this institutional gender deficiency among the EA and IAs/PIUs, the Gender Action Plan contains measures to ensure at least 10% of women are offered waged employment on the Project civil works construction and that the EAs and PIUs are also staffed by at least 20% of women with at least 10% women in management. MIH/DPWS to also develop greater gender sensitive and responsive policies and promote gender awareness training (at least 70% male participation) and provide training and employment opportunities to its female staff in technical and professional fields.

13. Ethnic Minorities

90. At the outset of the project – incorrectly it is argued here – it was more or less stated there were no ethnic minorities in any of the proposed project towns. Based on the Commune Databases it is relatively easy to see how this conclusion would be reached. The actual reality is quite different and there is approximately 10% of Cambodia's population that are ethnically non-Khmer. Moreover, most of the non-ethnic Khmer that consists largely of Vietnamese, Chinese and Cham either reside in urban areas of Cambodia or as in the case of the Cham also in rural and peri-urban areas. It is the upland indigenous peoples(including in the context of peri-urban Stung Treng the Kravet, Kreung, Lun, Brao and Tampoun that are subsumed within the category of Khmer Loeu (although ethnographers classify them as Lao Long). The table below represents a combination of data provided by the SES and the

informed estimates of the PPTA Social Development Specialists based on their ethnographic knowledge of ethnicity in Cambodia:

Table 20: Ethnic Minorities in Project Cities

Name of City	Cham	Vietnamese	Khmer Loeu	Chinese	Other
Stung Treng	32 HH (165)	80 HH (404)	136 HH (2,076)	296 HH (1,3320	Not Stated
Siem Reap	215 HH (1,553)	673 HH (3,206)	Unknown	3,188 HH (15,940)	Not Stated
Kampong Cham	456 HH (2,327)	168 HH (840)	Unknown	833 HH (4,168)	Not Stated
Svay Rieng	Unknown	225 HH (1,125)	Unknown	630 HH (3,154)	Not Stated

Source: Partial Use of SES, PPTA, June and July 2013 and Additional PPTA Estimates

91. There is a tendency among Cambodian officialdom to ignore ethnic minorities in their depiction of Cambodian society unless such groups happen to be lowland groups such as the Cham or the Chinese and a range of smaller upland indigenous groups. But when it comes to ethnic Vietnamese there is the often-repeated mantra that the Vietnamese belong in Vietnam and are not really Cambodians. Of ethnic minority groups in Cambodia the Vietnamese are the most vulnerable because of other Cambodian stereotypes that have developed since Saigon (Prey Nakhor) and the Mekong Delta was ceded to the Imperial Court at Hue more than 300 years ago. The impact is acutely felt by ethnic Vietnamese fisher-folk in the vicinity of the Tonle Sap, younger Vietnamese women who work in karaoke clubs and other night-clubs and skilled and semi-skilled Vietnamese labor. During political campaigns typically some vociferous opponents of the incumbent regime accuse it if shipping ethnic Vietnamese into vote, which has never been corroborated, but still bias and prejudice remain.

92. This of course is socially non-inclusive and for the ADB is in clear breach of its safeguard policy. Without a very detailed ethnic analysis there are ethnic minorities in all of the Project towns (e.g. Vietnamese minority in Kampong Cham, Svay Rieng, Sihanoukville and Siem Reap and some indigenous minorities in Stung Treng: this was clear from the 2009 Survey financed by the ADB and also Kampot) and it is pointless to deny this reality. The TA Consultant met some ethnic Lao in Stung Treng City who speak Lao and identify themselves as Lao but they also clearly stated in a mixture of both Lao and Khmer that they consider themselves to be Cambodians and all have Cambodian ID cards. Nevertheless, they are of different ethnicity to the Khmer as indeed are the ethnic Chinese who live in Cambodia but because the Lao and Chinese (and the Cham) are not discriminated against there appear to be no issues that would impact upon these groups negatively.

93. However, the PPTA has to address this issue and make it clear to MIME that social inclusiveness in Project design is necessary. Evidence gleaned from the field to date suggests that this will not be a problem and a standalone IPP is not required (not evident in the IPSA) but the social analysis needs to reflect ethnicity as a relevant variable. Issues that are of relevance is whether the improved and/or expanded water supply network will also serve sangkats that ethnic minorities are residing in and whether poorer and more vulnerable ethnic minorities where they exist in these sangkats are entitled to the same benefits (e.g., subsidized water supply connections) as other Cambodians of Khmer ethnicity.

19. Conclusion

94. This Project would have the greatest impact if water and sanitation improvements could be linked. It is beyond doubt that all people are entitled to access to clean water for drinking, cooking and bathing but the benefits of an improved water supply are diluted somewhat where there is inadequate attention paid to sanitation improvements. These improvements need not focus on the individual household although that would be ideal if

they did but especially on the local environment. Sanitation improvements can include good drainage to rid the streets, lanes and roads of surplus water during the rainy season, which as is well documented if allowed to stagnate becomes a vector for a range of water-related illnesses. In a similar manner, the disposal of solid waste, especially from local markets or venues where significant numbers of people congregate not only contributes to an improvement in the aesthetic appearance of urban spaces but also removes yet other vectors that can lead to disease and rancid odors. In Cambodia, however, responsibility for urban sanitation is primarily with the Ministry Public Works and Transport (MPWT), although there are other ministries also involved in certain aspects. In most developed countries, it is clearly recognized that water and sanitation improvements are inextricably linked but in Cambodia because of how the structure of government evolved after a long period of internecine civil war has frustrated what should be a necessary linkage between water and sanitation. Consideration is being given to having urban water supply and sanitation under a single agency, but realization of this is likely to be some years away.

95. It can also be noted at this juncture that women are more sensitive to environmental sanitation issues than men because they are far more likely to deal with such issues on a day-by-day issue (whether this be food prepared in the market or ensuring children on their way do not fall into an uncovered drain). Women also have to deal with such issues on a more periodic basis because when household members fall ill with a waterborne disease such as dengue where there are clear linkages between water and sanitation the increased workload as caregiver generally passes to them. This is not to argue that men are insensitive to such issues because of course men do not want to see other household members fall ill because of poor sanitation but unlike water it appears that sanitation issues are somewhat more abstract and esoteric for many men: an argument it should be for greater public hygiene awareness. The need for IEC training on hygiene and sanitation for the community is also crucial to induce positive change in household members' behaviour to ensure that welfare improvement from access to quality and reliable water supply is realized to the maximum.

96. However, it has to be accepted for the time being that the institutional linkages just simply do not exist and apart from Stung Treng will be very difficult to make for this particular project although perhaps for a subsequent sector program there might be the possibility for change. Therefore, the focus for this project needs to be on whether it will effectively contribute to an improvement in urban living standards. This is a relatively easy question to answer because of course if unserved households for the first time get access to high quality water in adequate quantities year-round the lives of their members will be radically transformed. Consuming water from problematic sources can be a very hit-and-miss affair and renders all users more vulnerable to poor health than if they have access to a good water supply system. The evidence from everywhere in the world both historically and contemporaneously supports this truism and Cambodians do not have to look any further than the water supplied in Phnom Penh by the Phnom Penh Water Supply Authority.

97. There is no need to undertake a *tour-de-force* of how the PPWSA evolved into the highly efficient supply entity that it is today except to note that with significant organizational cultural change and a commitment to treat all households supplied as customers rather than simply beneficiaries has enabled PPWSA to become the most effective supply entity in Cambodia. From the outset PPWSA clearly understood that once households are connected to the WSS they are customers for life. While PPWSA charges household connections it also has established a transparent criteria to ensure that even the poorest households can be connected. So good in fact is PPWSA that most consumers pay their monthly water bills on time because they know what the situation was like in Cambodia prior to the late 1990s: most people were reluctant to even clean their teeth in water supplied by the WSA at the time but then most need not have worried because most of the time water in sufficient quantities could not be supplied anyway.

98. It has to be noted that there are economies of scale when comparing and contrasting PPWSA with the WSA in the project towns and cities but replicating the ability of PPWSA to supply high quality water in sufficient quantities year round and at all or most times of the day is the benchmark this project is capable of achieving. The substantive difference is that after a series of stakeholder consultations (including discussions at both the Inception and Interim Workshops) it has been agreed in the context at least of Stung Treng and Siem Reap, where as argued in the introduction most of the loan finance will be invested, that all households will be entitled to free household connections. At approximately US$100 per connection the project will spend US$1,460,000 on securing these connections and the economic and financial analysis has produced an EIRR of xx.x% so even from a project investment perspective the project is viable.

99. This measure is warmly welcomed by all households that have been consulted although it also needs to be noted that there are some instances where households have suggested during those times of the year when they have access to harvested rain water or from water bodies such as rivers, streams and ponds they are less likely to use water supplied by the WSA. This will have a negative impact on the finances of the WSA but it is argued here that if the WSA can truly demonstrate the water is supplies is of high quality and customers are able to have access to water when they require it rather than when it can be supplied there is likely to be a fall-off in the current practice of extracting water from water-bodies. WSA will never be able to supply water with the same taste as rainwater but it is generally beyond doubt that WSA water is or will be superior to existing water bodies. There are often specific cultural beliefs, especially of upland indigenous peoples (of which a few live in at least one of the project municipalities) vis-à-vis the efficacy of chemically processed water and water extracted from for instance natural springs, but as the evidence from neighboring Vietnam demonstrates (e.g. among the Co Thu affected by the Song Bung 4 Hydropower Project financed by the ADB) existing cultural beliefs can be put to one side when it suits those who subscribe to them. Women especially because they collect and store most of the household water are very supportive of projects designed to improve water supply.

100. While the PSGA has focused largely on unserved areas of the project cities this does not mean that the improvements will not also favorably impact upon hitherto underserved households. The project investigations have revealed that WSA at present cannot supply water in adequate quantities to many current customers forcing the latter to also rely on other sources of water or store more water than is necessary for daily consumption. As with unserved areas of project cities it is generally women and children that have to collect this water when the existing WSS cannot meet individual household demand. Therefore, it can also be assumed that such improvements will reduce the existing burden on women and children. Evidence from functioning WSA elsewhere, including PPWSA, strongly suggests that where households have access to high quality water on a continuous basis they not only use such water for drinking and cooking purposes but also for bathing and washing purposes. For women and girls but actually for all household members being able to bathe in clean water and even have clothes washed in clean water not only addresses issues associated with personal hygiene (gynecological health improves) but also self-esteem (being neat and clean is a highly valued cultural trait in Cambodia) are very positive impacts.

101. However, there are some issues to ensure that women, the poor and ethnic minorities are able to benefit from the project to the same extent as men, the non-poor, and the Khmer ethnic majority.

102. It is assumed that household connections will be supplied free-of-charge but if there was a decision to charge for these connections on a sliding scale taking into account the socioeconomic status of individual households (the PPWSA model) that it is truly the poor

and vulnerable that attract the greatest subsidy. The standard conventional wisdom is that female-headed households are more vulnerable than male-headed households but the reality is that is depends on dependency ratios and whether adult income-generating males also live in the same household. There are of course households headed by males where it is likely – although the SES does not reflect this – where the household is poor for a variety of reasons and gender might not be the causative factor. This requires a degree of intra-household analysis that MIME is probably not capable of undertaking because often the dynamics are quite subtle. Hence the project needs to develop the capability of MIME to undertake this type of relevant analysis.

103. In relation to ethnic minorities the Khmer often assume there are no poor Chinese, Vietnamese or Cham households in Cambodia. It is very likely that a robust socioeconomic analysis would corroborate this assumption of the Khmer but it is argued here there is a requirement to ensure that if such ethnic minority households are indeed poor they should receive the same benefits as the Khmer. It is very likely that the project will have no trouble with the Chinese or the Cham and would if necessary ensure such households would enjoy the subsidization commensurate with their socioeconomic status. However, as per the caveat elsewhere in this PSGA there is likely to be some issues with ethnic Vietnamese households (for instance their exclusion from population data supplied for at least Svay Rieng even though household connections are not envisaged for this subproject investment) that the project needs to address. Similarly there is also the need to address the upland indigenous groups residing in Stung Treng (subsumed under the rubric of Khmer Loeu to make it easier for the GOC) and ensure they also receive benefits.

104. As argued by the PPTA Social Safeguards Specialist there is no need to prepare a standalone Indigenous Peoples Plan for this specific project. Rather MIH will need to ensure that all households irrespective of ethnicity are entitled to the same benefits. This extends not only to free or subsidized household connections but also in the unlikely event that involuntary resettlement (primarily in the form of compulsory land acquisition) is necessary, which according to the existing resettlement planning documents is not. Nevertheless, there may be some temporary impacts during infrastructure-related construction activities (e.g. installation of water supply network pipelines) that might also affect ethnic minority households and in such instances they are entitled to the same compensation as the Khmer.

105. A related problem is that if information about the project is not adequately disseminated and people for instance are not notified that they are entitled to free-of-charge household connections local contractors, local WSA employees, or even elected sangkat representatives, they might end up paying for such connections or if entitled to a subsidized connection might not be notified accordingly. This is not to imply that MIH at the national level would condone such practices or even local WSA would be a party to such practices but the reality is that there are too many instances in many contexts (not just Cambodia) where the putative benefits of projects often accrue on an informal basis to parties with less integrity than they should have.

106. Specifically in relation to gender issues a project of this nature is unlikely to involve large numbers of waged workers from elsewhere in Cambodia because the technical skills required are generally available locally although perhaps not in places such as Stung Treng. Nevertheless, as with all infrastructure projects waged workers from elsewhere are more prone to engage in risk-related activities than if they were domiciled with their family. The project via the Environmental Management Plan needs to ensure that HIV/AIDS and other STI's (should also include all communicable diseases) awareness and prevention plans are prepared. It is not considered that human trafficking is a major social risk but the Social Development Specialist contracted to implement social development related components of the project needs to be sensitive to this issue. This should not be too onerous because MIH is hoping to have a small number of contract packages (primarily to attract ICB to ensure

better designed projects) and the project supervision consultants should be versed in how to assist contractors develop plans appropriate to Cambodia (actually NGOs such as CARE have a lot of experience in the implementation of such plans for infrastructure projects in Cambodia). There are also occupational and health safety issues that will concern women (and of course to some extent men as well) such as the dangers posed by mechanical excavators, newly dug network pipelines, difficult access to houses fronting civil works activities, and noise and dust. Affected women should be able to take their complaints directly to contractors and if unresolved to MIH.

107. While there are likely to be local waged employment opportunities MIH needs to ensure that at least 10% of these opportunities in civil works construction and post construction operation and maintenance are offered to women. There is absolutely no reason why women cannot undertake most of the labor-based activities associated with a project of this nature and women can simply refer to the existing GDOL. Moreover, even if the GDOL was very biased against women a project of this nature being financed by the ADB *ipso facto* requires gender inclusiveness wherever possible. Priority should be accorded the poorest women and only if they decline should other women be offered employment. In most of these project cities given the dearth of waged employment opportunities available to poor women this would clearly benefit women.

108. According to the baseline data presented in the section on Institutional Gender Analysis, women employment and representation in management in most of the EA (MIH/DPWS) and PWWs/PIUs is fairly low. It shows that most of the EAs and PIUs have still a long way to doing justice to the implementation of Government's policy on gender mainstreaming. They have room to recruit more women to ensure gender balance as well as promote women into management during the duration of the Project. The training of women in the identified areas of training need is also important to enhance their chances of promotion into higher positions including management which will increase their incomes as well as their role in management and decision making.

109. Finally, MIH should develop a participatory-based monitoring and evaluation process whereby people who stand to benefit from this project or feel they might have missed out or are missing out because of poor implementation procedures, are able to provide their own assessment of the project's positive and negative impacts. Local people as part of the stakeholder engagement process need to assume ownership of this project and being involved on an iterative basis this is more likely to occur and ensure outcomes that justify the investment in the project. The project can also serve as an exemplar for other projects including the proposed ADB sector program investment.

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