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ASSESSMENT OF TOWNS FOR POSSIBLE PIPED WATER SYSTEMS

TASK ORDER NO. 04

JUNE , 2009

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CAMBODIA MSME 2/BEE PROJECT

ASSESSMENT OF TOWNS FOR POSSIBLE PIPED WATER SYSTEMS

TASK ORDER NO. 04

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Executive summary

The USAID-Funded Cambodia MSME 2/BEE project, which is being implemented by Development Alternatives, Inc. (DAI), (thereafter named the Project) aims to improve the performance of firms in: a) select value chains, b) support public-private dialogue and c) strengthen public sector through targeted technical assistance.

With the objective to assess opportunities for piped water system development and recommend a strategy to foster WSP investments in such towns, the Project awarded a contract to GRET to conduct a survey of 32 small towns proposed by MIME within 6 provinces.

Small Towns Assessment and findings

The scoring and ranking process of the towns in each province was made using 4 main fields:

1. Technical feasibility
2. Estimation of water market
3. Local project support environment
4. General and business environment

For each field a number of criteria have been used, consisting in provided data or analysis of survey. Full details on the criteria used and the scoring process can be found in Annex 3. A report for each town and each province is also available.

A classification of towns in Annex 5 highlights that

- 60 % have good potential, meaning easy access to raw water source and high technical feasibility and an existing unlicensed PWS or a potential local investor. About half of these ones (9) have all ingredients to start quickly. Among the 6 Provinces, three represents 70% of this category (Kratie, Kandal, Pursat).
- 28 % face difficulties in access to raw water (quantity or quality)
- 12 % are small or remote town where it will be difficult to develop a full private business and a “community system” with a private management.

Easy access to raw water is a determinant factor in private initiatives and local investor has more investment capacity and often appropriate piece of land to create or develop a business.

| | High Technical Feasibility | | | Medium Technical Feasibility | | |
|---|----------------------------|--------|---------|------------------------------|--------|---------|
| Local Investor EoInt. (%) | 82% | | | 47% | | |
| Investment capital (US\$) | <20,000 | 20,000 | >20,000 | <20,000 | 20,000 | >20,000 |
| Local Investor EoInt. (%) | 36% | 43% | 21% | 100% | - | - |
| % of Local Investor with appropriate private land | 50% | | 100% | 15% | | |

Electric grid is usually a good indicator of town development and economic activity but we found that there are 80% chance to find also a PWS in town if access to raw water is easy, if not figure fell to 10%. Combining provincial data of existing electric business license with existence of unlicensed PWS could be a quick way to preselect additional promising towns.

In the 6 provinces there are 44 licensed PWS and 10 more did submit their application to MIME. About 100 unlicensed PWS are also authorised by Provincial DIME.

Provinces and communes concerns and recommendations

Provinces staff from MIME mentioned that main problem to solve access to water is the lack of fund at province level to support initiative and attract private investors. Access to a suitable raw water source is also an issue in some provinces (Battambang, Pursat, Kampong Thom and Kampong Cham). They understand that developing a water business needs a lot of money and investment return is slow. They recommend also to provide training to the PWS managers.

Communes authorities are very supportive (75%) for private sector to handle investment and operation but would like to keep an eye on management. This means that they want (75%) to take responsibility at local level for the good delivery of the water service which is definitely their mandate according to article 43 on Commune Administration Law (January 2001) .

Communes recommend defining a low and affordable tariff (50%), involving population (44%) and authorities (28%) in the process. They would like the Project assistance to find private investors (22%).

Strategy and recommendations

As the Project is looking for maximum efficiency we recommend to start working with the most promising towns (9) and to identify in the 12 provinces additional towns with great potential using the criteria described above (electric license + unlicensed PWS + size of population).

Based on findings and our past experience we recommend to **build on existing local initiatives** and to **provide financial incentives**. These grants would help private investor to cover investment cost of infrastructure and equipment for water quality which both clients and providers does not consider as primordial. Grants would be phased on an OBA based design to sustain cash flow of water entrepreneur during construction and development period. Decision making for grants allocation could be made at national level, monitoring and management of allocated grants could be done at provincial level.

We recommend the Project identify and shortlist national (and/or provincial) companies with appropriate skills and capacity to deliver within a range of agreed prices good quality deliverables for the following services (Feasibility study including Business plan and financial setup, technical design, bidding documents, work control monitoring, technical and business operational training). A percentage of such **Technical Assistance** cost could be covered by incentives. Special attention would be given to the **Institutional arrangements** (selection of investor, negotiation of a service delegation contract, etc.) because they are the key of smooth implementation and durability of each sub project. It is recommended that the same institution or company is in charge these arrangements and the feasibility study as it is preliminary. Each town will have different context, motivation and financial capacity of main stakeholders and land location and ownership. We recommend **using a variety of management models** (BOO, BOT, DBL and management) to fit this reality. It is recommended to **include pro-poor measures** to facilitate access for all and comply with 2003 National strategy.

Public Private Partnership still need to be promoted and explained clearly both at national and provincial level. Workshops will help anchoring the foundation of PPP approach.

Creating economic linkages through provincial forum where commune authorities would present water demand and advantages to invest in their towns, local PWS their motivation to create a share water company to a panel of national and provincial investors.

Even we know it is difficult we recommend the Project to discuss with banking sector **to tailor a Credit for such kind of SMEs**; it would boost initiatives not only on water, , but could also find clients in other sector of activities (agro business, tiles production, electricity, etc.).

I. INTRODUCTION

1. Context of the study

The USAID-Funded Cambodia MSME 2/BEE project, which is being implemented by Development Alternatives, Inc. (DAI), (thereafter named the Project) aims to improve the performance of firms in: a) select value chains, b) support public-private dialogue and c) strengthen public sector through targeted technical assistance.

This Project covers twelve provinces and the select value chains include a water and sanitation component. Within this framework, specific activities have been planned with the objective to support the licensed and/or the unlicensed water service providers (WSPs) that are currently operating in small towns of rural Cambodia, toward the expansion or the replication of their businesses.

In 2005, a Water Supply and Sanitation in Small Towns of Cambodia Study, funded by AFD, carried out a survey of 60 small towns within 9 provinces. From this survey, a typology of small towns was developed, resulting in a classification of three types of towns on the basis of their rural or urban characteristics. As the Project would like to build on the outcomes of the study conducted in 2005, DAI therefore decided to contract the Group of Research and Technological Exchange (GRET) for an assignment entitled “Assessment of Towns for Possible Piped Water Systems”.

2. Terms of references and objectives

2.1 Scope of work

The focus areas of this assignment were expected to cover the following:

- An update of the main relevant data of type 2 and type 3 small towns identified during the 2005 MIME study funded by AFD;

Over the 60 small towns that had been studied in 2005, there are 41 under types 2 and 3, including 37 that are located in the 8 overlapping provinces.

- An assessment of the opportunities for piped water service development and rank towns where implementation within one-year time frame the Project would have more chance of success;
- A strategy framework and a set of activities to foster WSP investments in such towns where it should be placed most emphasis.

2.2 Survey methodology

Two main activities were envisaged for this assignment and have been undertaken: a brief desk review and a small town survey.

Desk Review

After screening with MIME the 37 overlapping small towns to eliminate those already licensed to a WSP, 32 small towns have been selected, including 22 from the list established in 2005 and 10 new ones as proposed by MIME. The survey was then conducted in these 32

towns within 6 provinces with participation and support of MIME, Department of potable water.

Small Towns Assessment

The scoring and ranking process of the towns in each province was made using 4 main fields:

1. Technical feasibility
2. Estimation of water market
3. Local project support environment
4. General and business environment

For each field a number of criteria have been used, consisting in provided data or analysis of survey. Full details on the criteria used and the scoring process can be found in Annex 3. A report for each town and each province is also available and can be found in previously submitted reports.

Five models of questionnaires including a mix of closed and open questions have been prepared to characterize the present situation, and to determine the willingness and the expectations at the different institutional levels:

- ✓ One institutional questionnaire for the provincial level: Province, PRDC, PDIME, etc.
- ✓ One institutional questionnaire for the local level: Commune council and leaders.
- ✓ One technical questionnaire (general information and water specific)
- ✓ One main business questionnaire (electric and water main providers) with objective to identify local investors interested to create or develop a PWS.
- ✓ One qualitative socio-economic questionnaire: to identify the capacity and the willingness to pay of the customers.

Answers and data have been classified under the main following categories:

- General information of the small town: Location (province, city town), Size, Population (total population and agglomerate population), density and Geography, GPS data, Type of town, number of agglomerate village.
- Business activities and economical potential: Market size, Resellers, Electric grid, water sellers, willingness, capacity to pay, and satisfaction of the customers, existing of alternatives resources.
- Access to water: type of water facilities, origin and potential of water sources, water consumption per day, water use and practices.

A set of photographs (water source, public service building, private business, market, Water providers, etc.) provides an overview of each town.

And Town mapping

Town maps have been created or updated using GPS for positioning the main buildings and the water sources. Along each street, road or path; houses have been counted and their number reported on the map. A code relying on three different colors has been used to highlight low, medium and high densities as below:

| Distance between the houses | Level of density | Estimated* density (inhabitants/km ²) <small>*based on 75 m width on each side of road</small> |
|-----------------------------|------------------|---|
| Less than 5m | High | over 13,300 |
| from 5 to 15m | Medium | from 2,300 to 13,300 |
| Over 15m | Low | below 2,300 |

2.3 Outputs and deliverables to date

Below is the list of expected deliverables. This last report and related slide show will complete and end the assignment.

| Study Outputs | Status |
|--|------------------|
| <i>Desk review</i> | |
| Brief report of existing studies | submitted |
| List of the small town selected | submitted |
| <i>Small town survey</i> | |
| Field survey instruments both in English and Khmer | submitted |
| One synthesis report for each small town | submitted |
| One synthesis report for each province | submitted |
| One Excel Database for all small towns | |
| <i>Results analysis</i> | |
| One scoring and sampling report per province | Submitted |
| One national scoring and sampling report | Submitted |
| <i>Strategy and set of activities</i> | |
| One report on implementation strategy and set of activities. | Submitted |
| One PPT presentation. | Submitted |

II. DISCUSSION OF THE MAIN FINDINGS

1. Summary of the assessments update

Table 1 : Geographical distribution of the assessed towns in the 6 provinces

| <i>Count of Town type 2 and 3</i> | |
|--|--------------|
| <i>Province</i> | Total |
| <i>Battambang</i> | 4 |
| <i>Kampong Cham</i> | 7 |
| <i>Kampong Thum</i> | 6 |
| <i>Kandal</i> | 4 |
| <i>Kratie</i> | 6 |
| <i>Pursat</i> | 5 |
| <i>Grand Total</i> | 32 |

In 2005, the three main types of towns had been defined according to the following criteria:

Table 2 : main criteria used by 2005 assessment

| Criteria | Type 1 | Type 2 | Type 3 |
|---|---------------|---------------|---------------|
| <i>number of Households</i> | x<350 | 350< x < 550 | x>550 |
| <i>density inhabitants/ha</i> | 19 | 30 | 47 |
| <i>concrete houses in %</i> | 6.4 | 5.2 | 4.5 |
| <i>electricity network connection rate</i> | 36 | 56 | 29 |
| <i>number of stands in local market place</i> | 66 | 78 | 122 |
| <i>population growth rate in %</i> | 4 | 2.2 | 1.3 |
| <i>% of HH with wells</i> | 12 | 13 | 6.5 |
| <i>geographic distribution type</i> | | | |
| <i>type A = road center</i> | xxx | 10% | >50% |
| <i>type B = crossroad center</i> | xxx | xx | xx |
| <i>type C = crossroad + crisscross pattern center</i> | | >50% | x |
| <i>type D = crisscross pattern center</i> | | x | x |

In 2009 the towns surveyed were supposed to be part of types 2 or 3 as defined in the table above. In fact, through the survey we found out that 2 small towns had a total number of houses < 350 (Ta Lou in Pursat and Ou Rumduol in Battambang). The table below shows that using number of houses as discriminator, updated results

- for type 2 are similar for density and number of stands in local market, while electricity connection rate is almost twice lower and distribution pattern is less crisscross and more road type
- for type 3 (including type 4 as this class did not exist in 2005) are different: density and number of stands in market are lower but electricity connection rate is higher and majority of houses arrangement is crisscross.

Table 3 : Results for 32 towns surveyed in 2009 assessment

| Criteria | Type 2 | Type 3 | Type 4 |
|--|---------------|---------------|---------------|
| <i>number of Houses</i> | x < 550 | 551 < x < 999 | x > 1 000 |
| <i>number of towns</i> | 7 | 15 | 10 |
| <i>density inhabitants/ha</i> | 32 | 37 | 45 |
| <i>concrete houses in %</i> | - | - | - |
| <i>Existence of electric grid (%)</i> | 33% | 50% | 23% |
| <i>electricity network connection rate (%)</i> | 33 | 50 | 25 |
| <i>number of stands in local market place</i> | 70 | 65 | 46 |
| <i>population growth rate in %</i> | - | - | - |
| <i>% of HH with wells</i> | - | - | - |
| <i>geographic distribution type</i> | | | |
| <i>Road = type A</i> | 43% | 13% | 30% |
| <i>Crossroad = Type B and C</i> | 43% | 66% | 20% |
| <i>Crisscross = Type D</i> | 14% | 20% | 50% |
| <i>Existing PWS</i> | 29% | 47% | 20% |

From the survey it seems that existing unlicensed PWS develops more often in larger towns. The drop in this trend that we observe for type 4 is because 70% of large towns (over 1000)

are from Kampong Cham and Kampong Thom where only one PWS has been found because of difficult access to raw water source.

2. Summary of constraints and potentialities of the sites

Considering the whole sample of 32 towns and looking at the objective of this assignment : (i) selecting the most promising small towns to develop a PWS and (ii) “encouraging rapid investment in the sector”, we propose to organise the classification of them using following fields:

- (1) Technical feasibility
- (2) Existence of a Piped Water Supply
- (3) Expression of Interest of a local Investor
- (4) Capacity of investment of local investor

Then for each class public or private land available would be considered as an asset. You would find the detail complete list on Table 5.

2.1 Analysing results to define strategy

We can observe in table 4 below that there are about twice more investors interested to upgrade their existing systems when the access to raw water would be easy to solve. Moreover, in difficult technical context, all of them declared that the amount they would be willing to mobilize for additional water-related investments, would be less than 20 000 US\$, and only one of them said that he had sufficient land to build the system. In each situation, percentage of local authorities that proposed to support the Project by providing a piece of public land is similar (~35%).

Table 4 : Tentative Classification of 32 towns surveyed in 2009

| | High Technical Feasibility | | | Medium Technical Feasibility | | |
|---|----------------------------|--------|---------|------------------------------|--------|---------|
| Local Investor EoInt. (%) | 82% | | | 47% | | |
| Investment capital (US\$) | <20,000 | 20,000 | >20,000 | <20,000 | 20,000 | >20,000 |
| Local Investor EoInt. (%) | 36% | 43% | 21% | 100% | - | - |
| % of Local Investor with appropriate private land | 50% | | 100% | 15% | | |

Therefore, it is clear that access to raw water hinders equitable access of the population to potable water and the private investment that could help provide potable water. The government could facilitate access to viable raw water source (quality and quantity) and enable private investment in potable water by developing a proper strategy with appropriate institutions (MIME, MEF, Provinces PDoWRAM, District LUM, etc) to allocate raw water resources between their many users (agriculture, hydropower, industry, household drinking water, etc.) and the natural environment.

We suggest, whenever possible, the Project to address this problem by supporting extra cost (technical research, great depth drilling, big pond for storage, etc.) to facilitate access to raw water.

| |
|---|
| Extra orientation: Facilitate access to raw water source |
|---|

Out of the 32 small towns surveyed by the team, there are 34% settlements (11) where an unlicensed WSP is already delivering water service. The oldest WSP started to operate in 1989 and the most recent one was established in April 2009.

While none of the PWS operating in the surveyed sites was granted a licence, we found out all of them but one has at least received informal commune authorisation.

Large majority of them are willing to develop their business but only a few have enough capital to do it.

First strategic orientation: Build on the local initiatives;
Second strategic orientation: Provide incentives (grants, credit and technical assistance)

Based on data collected at National and Province level, there are a great number of existing PWS with granted authorisation from Province. It will be relevant to use this list to identify new towns for PWS development.

| Province | MIME License | PDIME authorisation | Kolka (License on going) | Total WSP |
|--------------|--------------|---------------------|--------------------------|------------|
| Kampong Cham | 4 | 30 | 4 | 38 |
| Kandal | 18 | 28 | 6 | 52 |
| Kampong Thom | 3 | 16 | - | 19 |
| Kracheh | 5 | 10 | - | 15 |
| Battambang | 13 | 7 | - | 20 |
| Pursat | 1 | ? | - | 1 |
| Total | 44 | 91 | 10 | 145 |
| | 30% | 63% | 7% | |

All this strategic orientations have been confirmed by Commune and/or Province level during interview as it is described in next chapter.

Table 5 : Tentative Classification of 32 towns surveyed in 2009

| TechFeas | PWS | Investor | Cash | Name of town | District | Province | ProvRank | Houses | PubLand | Privland | Potential |
|-------------|----------|------------|---------------|--------------------|---------------|--------------|----------|--------|---------|----------------------|----------------------|
| High (17) | Yes (10) | Yes (9) | > 20,000 | Sambour | Sambour | Kratie | 1 | 610 | No | Yes | High |
| | | | | Chheu Khmau | Koh Thum | Kandal | 3 | 702 | No | Yes | |
| | | | 20,000 | Leach | Phnum Kravanh | Pursat | 1 | 820 | No | ? | High to be confirmed |
| | | | | Chambak | Preaek Prasab | Kratie | 2 | 872 | Yes | Yes | |
| | | | | Pramaoy | Veal Veng | Pursat | 4 | 395 | No | ? | |
| | | | < 20,000 | Chheu Tom | Krakor | Pursat | 3 | 899 | No | ? | Medium |
| | | | | Kampong Kong | Koh Thum | Kandal | 1 | 1,383 | Yes | Yes | |
| | | | | Pongro | Chhloung | Kratie | 5 | 970 | No | Yes | |
| | | | | Sandan | Sambour | Kratie | 4 | 920 | No | Yes | |
| | No (1) | No | Kanhchor | Chhloung | Kratie | 6 | 1022 | No | No | Low | |
| | No (7) | No (2) | No | Tuol Preah Khleang | Stueng Trang | Kampong Cham | 3 | 660 | Yes | | No |
| | | Chheu Teal | Sandan | Kampong Thum | 5 | 510 | No | No | | | |
| | Yes (5) | > 20,000 | Thma Kreae | Kratie | Kratie | 3 | 701 | Yes | Yes | High | |
| | | 20,000 | Lvea | Bavel | Battambang | 1 | 1,094 | Yes | ? | High to be confirmed | |
| | | | Boeng Khnar | Bakan | Pursat | 2 | 774 | No | ? | | |
| | | < 20,000 | Leuk Daek | Koh Thum | Kandal | 2 | 794 | Yes | Yes | Medium | |
| | | | Svay Teab | Chamcar Leu | Kampong Cham | 1 | 1,260 | No | ? | | |
| Medium (15) | Yes (1) | No (1) | No | Slab Kdaong - Chob | Tboung Khmum | Kampong Cham | 4 | 480 | No | No | Low |
| | No (14) | No (7) | No | Andong Pou | Baray | Kampong Thum | 3 | 1,473 | Yes | No | |
| | | | | Ou Rumduol | Phnum Proek | Battambang | 4 | 299 | Yes | No | |
| | | | | Spueu Cheyyou | Chamcar Leu | Kampong Cham | 6 | 550 | Yes | No | |
| | | | | Chranieng | Baray | Kampong Thum | 4 | 1,122 | No | No | |
| | | | | Kokir Thum | Baray | Kampong Thum | 6 | 522 | No | No | |
| | | | | Preaek kamps | Kandal Steung | Kandal | 4 | 616 | No | No | |
| | | | | Kaong Kang | Ponhea Kraek | Kampong Cham | 5 | 1,030 | No | No | |
| | Yes (7) | < 20,000 | Boeng | Baray | Kampong Thum | 1 | 1,088 | Yes | Yes | Medium | |
| | | | Dar | Memot | Kampong Cham | 2 | 1,260 | Yes | ? | | |
| | | | Snoeng | Banan | Battambang | 3 | 871 | No | ? | | |
| | | | Ta Lou | Bakan | Pursat | 5 | 335 | No | ? | | |
| | | | Khnach Romeas | Bavel | Battambang | 2 | 738 | No | ? | | |
| | | | Sankor | Kampong Svay | Kampong Thum | 2 | 1,094 | No | ? | | |
| | | | Kraek | Ponhea Kraek | Kampong Cham | 7 | 846 | No | ? | | |

3. Summary of constraints and potentialities of the public institutions

While surveying each site, the team also tried to evaluate the potentialities and the constraints to engage formally the public authorities for the delivery of the water service. Indeed, it is now widely accepted that the introduction or the promotion of the private sector toward the development and the improvement of piped water services may achieve more sustainable outputs under contractual arrangements involving the public sector. Therefore, during the study the team interviewed officials among different public institutions in order to gauge their interest, their strength and their willingness to promote participation of private sector for water service development.

Information and recommendations they provided are presented thereafter for each level two main points

- recommendations from Province
- Recommendations from Commune

Please note that these provincial or commune recommendations may not reflect and may not be in accordance with national level practice and policy.

3.1 At province level

All Provinces will provide support for implementation of a project aiming at developing PWS. Province do not know interested private investor, except In Kampong Cham where PDIME can provide contact of 4 existing PWS interested to develop their system.

1. Most urgent problems related to water supply

| | % | Comment |
|---|-----|--|
| Lack of fund at Province level to invest in water | 50% | covers both public and private fund availability |
| Difficulty to find eligible raw water source | 50% | Battambang, Pursat, Kampong Thom |
| Attract more private investor | 50% | |
| Lack of technical knowledge | 17% | |
| High investment cost and low pay back | 17% | |
| Insufficient financial capacity of existing private PWS, even high willingness to develop | 17% | |
| setting pipeline along “public-private” land | 17% | |

2. Province recommendations

Then province staff from different technical ministries (mainly PDIME and PDRD) suggested what could be the role of government and the type of strategy more appropriate to solve these problems.

| Problem to address | Role of Government | Strategy | Comments |
|---|--|---|---|
| Difficulty to find eligible raw water source | | facilitate access to raw water, drill wells, etc. | |
| Attract more private investor | | MIME to prioritise Water investment and appropriate policy | A lot of words have been used to express : Attract, encourage, facilitate, give opportunity, etc. |
| Lack of fund at Province level to invest in water | create a foundation for water Facilitate loan with low interest and long term | find more International, NGO funding | |
| setting pipeline along “public-private” land | | Education and awareness of population | about clean water but also sanitation |
| High investment cost and low pay back | Tax exemption for water supply materials Public sector to invest where there is no water market or no investor. | promote local existing private system to scale up | |
| Appropriate procedures | province provide documents and guidance | Province has a coordinating role and interface between national and local | Process start at Province and then a bottom up approach. Needs also population participation. |
| Lack of technical knowledge | facilitate technical knowledge assist in solving location of system. | | |

To address all of these issues and in order to attract private investment there is a need to clarify business legal environment.

Third strategic orientation: Propose a variety of management models

Fourth strategic orientation: Set the foundations for Public private partnership

3.2 At commune level

According to commune council knowledge, there is no plan, at whatever institutional level (Commune, District, Province, national) to develop a WSP in none of the 32 towns surveyed. In majority, commune preferences (75%) for a successful project rely on private investment and operation combined with public institution involved in management.

| institution preferred for | Public | Private |
|----------------------------------|---------------|----------------|
| Investment | 34% | 78% |
| Operation | 25% | 75% |
| Management | 75% | 34% |

They propose to make a more precise survey to make sure that population is willing to connect and pay for water (16%). They recommend a low or affordable tariff (50%), and have concerns about future water quality (13%). They wish to inform and involve population (44%) and to play an active role in the process (25%); but only 6% commit to use their commune fund to support a PWS project.

| Communes recommendations | |
|--|-----|
| A low and affordable tariff | 50% |
| To involve and inform population | 44% |
| to involve commune authorities in the process and management | 28% |
| To assist in finding a private investor | 22% |
| To study demand – make sure that population will connect and pay | 16% |
| To have good water quality | 13% |
| Have no idea | 6% |
| Ask for MIME support | 3% |
| Ask for funder support | 3% |

Only one commune does not want to participate in a provincial meeting to present findings and discuss future water service development and four of them if the meeting is held at national level. Two request per diem as condition to participate. Average affordable duration for both is 2 days.

III. STRATEGIC CONSIDERATIONS AND SET OF ACTIVITIES

Strategies to promote investment in water supply in the surveyed towns are presented thereafter. Set of activities to implement strategies are detailed in Annex 4.

In Annex 5 each town is sorted in a group of capacity to answer quickly to the Project with adequate strategy.

1. Proposed strategy

One objective of this assignment was to design a strategy and propose a set of activities that could contribute to promoting private investments in the small towns targeted (Types 2 and 3). From the information obtained during the survey, we can now suggest 4 strategy orientations:

| | |
|--|---|
| Main strategy | |
| O) Widen the Project target | O1) Identify more high potential towns in the 6 Provinces O2) Upscale to the other 6 Provinces covered by the Project |
| A) Build on the local initiatives, | Start the Project implementation first in towns with a strong commitment expressed by an existing unlicensed PWS or Commune authority. |
| B) Provide incentives 1 (grants, credit) | B1) grant for a “community” based “sub project” B2) grant for a public private partnership “sub project” B3) facilitate access to credit B4) grant for quality control equipment B5) fund to facilitate connection of poor households |
| C) Provide incentives 2 (technical assistance) | C1) Organize provision of TA for Feasibility study C2) Organize provision of TA for Technical design and bidding C3) Organize provision for monitoring C4) Organize provision of TA for technical and business management training |
| D) Propose a variety of management models, | D1) DBL for “community” “sub project” D2) BOO or BOT for PP “sub project” |
| E) Set the foundations for Public private partnership | E1) Organize a provincial one shop service for registration E2) Promote and facilitate Public Private partnership at Provincial level E3) Facilitate PWS Provincial Association and/or National Union |

1.1 Strategic orientation O : Widen the Project target

If a rough estimation of budget allocation for licensed PWS willing to expand their Business and for selection of “new towns” does not use total project fund, we recommend widening target.

It have been highlighted that most of towns having capacity to respond quickly are those having an existing unlicensed PWS. From provincial information we also know that at least 60 more towns have an unlicensed PWS (provincial authorization).

A preliminary activity could be to identify more high potential towns in each Province. Activities would be first to preselect within the list, using data and knowledge of provincial PDIME, towns where PWS use river or abundant surface water and where a sizeable electric grid exists, and second to confirm best ones by a rapid assessment.

The same approach could be applied to **Upscale in the 6 others Provinces** where the Project is working.

1.2 Strategic orientation A: Build on the local initiatives

- First step : Feasibility study

A feasibility Study is the first milestone and must be implemented by the Project or a skilled institution. It will confirm or not viability of “sub project” and update local investor presence and willingness.

- Second step : Selection of local Private investor/operator

Where a local investor is willing to start or develop a piped water business in one targeted small town, we do recommend supporting this initiative by all means. Indeed, our experience demonstrates that water service management is generally much better managed with a native service provider who is already trusted by the population and the local authorities. Obviously, the Project should define eligibility criteria for those investors showing interest in water business to ensure that they will be able to perform service management with acceptable quality standards. But, we consider that competitive tendering process should be avoided whenever possible to favor local initiatives.

Moreover, the Project should give priority to the small towns where the local authorities show commitment and express willingness to partner with the local private sector. Although the sustainability of the service does not necessarily imply a formal contractual arrangement with the communal authorities, there is strong evidence that regulation is better achieved when the commune plays an active role from the very beginning of the implementation process. Therefore, whatever the institutional set up for WSP registration (license and/or service delegation contract), we highly recommend to involve the commune in the decision making process.

Depending on the situation in the small towns the selection criteria would differ. In all towns to facilitate “sub project” implementation we recommend to ask the Commune(s) writing a commitment signed by Commune Council to with the following

- to allocate (if necessary) a fixed amount (based on households targeted) of their CDF for expected year of construction (for example : 10 US\$ per HH if commune provide appropriate land for infrastructure or 15 US\$ without land);
- to provide a piece of public land (if any) for construction (location map attached to dekka);
- to facilitate setting of piped network at standard distance from road central line even in private property;

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- to organize hygiene awareness and social marketing with appropriate institution with their own fund or other external support (PDRD, NGOs);
- to identify and draft list of poor families in the town (villages) using MoPlanning procedures and standard (funds could be provided by the Project on an OBA basis after connection).

1. For small towns with one pre-existing unlicensed PWS:

The Project could receive a written commitment from PWS for business development showing

- the amount of money he (she) can mobilize
- needs for credit (if any)
- willingness to accept share holders (if needed)
- description of own piece of land for construction (if needed)
- acceptance to build on public land¹ (if any)
- to comply with regulation and register
- to negotiate and maintain a reasonable tariff to be set in future contract.

Commune organizes a population town meeting to validate PWS local selection and then write a Dekka for official approval.

In case several PWS are active in the town, a local call for expression of interest will be launched. Each PWS candidate will present a written document of its project. Examination and selection at commune level with support from Province and the Project or TA.

2. For small towns with no PWS but local investor

Same procedures as above only if one or several investors with enough funding capacity.

3. For small towns with no PWS no investor:

Discussion and commitment with Commune are similar but they must also agree to accept external candidates for investment and participate in promotion activities for their town as in strategy E2.

In case of very small town or very limited water market where only option is “community” based “sub project” (DBL or management contract) the same commitment is required but allocation of CDF fund become compulsory. A fixed amount based on households targeted for expected year of construction will be defined (for example : 10 US\$ per HH if commune provide appropriate land for infrastructure or 15 US\$ without land);

1.3 Strategic orientation B: Provide incentives 1 (grant, credit)

We have seen that most existing WSP deliver raw water without treatment. Often both clients and water supply providers are not convinced that they would benefit from upgrading (investment cost on one side, increase on tariff with shortsighted view on health impact and sav-

¹ When Commune or District can provide a suitable piece of public land, we recommend to develop a contract partial BOT (water treatment plant on public land and other infrastructure on private one), so that in case the private provider stop its activity Commune keep some power to solve the problem and continue to deliver safe water to population.

ings). We recommend the Project provide grant to attract more private funds or at least to upgrade water distributed to national standard. Two main category of situation must be considered

- (i) Water market is too small to attract a private investor but public financial support is enough to develop a “community sub project” to be operated under a local type of leasing or management contract.
- (ii) Water market size is enough. Different level of Grant will be proposed.

On operational point of view, the Project would have to choose its strategy. Our feeling is that a full OBA approach will not be successful, because only Big investors would be able to answer and they are not often interested by this kind of high investment long term payback business. Existing small or medium water entrepreneurs are more likely the target, but they would not have enough capital upfront and they would not invest in a detailed study without guarantee and help. They need support and to be entrusted. So we recommend a mixed system.

➤ Grant for detailed study

Selected investor will contact, place in competition and select a company for technical design, studies and bidding documents. He will pay a % of total cost and the Project remaining (70/30 or 50/50). (see also C2 organize provision of TA for technical design and bidding)

➤ Grant for a “community sub project”

For the infrastructure, after bidding Commune signs a contract with successful bidder and will pay. Grant is paid in steps to the investor as soon as work is checked and confirmation of payment by contractor.

| Public + management | first payment | 2nd | 3rd | Poor |
|---------------------|--|---|--|--|
| When | Treatment plant construction is completed | other investment as in FS completed | When at least 50 % of target connected | At least 30 poor connected |
| how much | XX¹ US\$ x total client target | YY¹ US\$ x total clients target | WW¹ US\$ x client really connected | ZZ¹ US\$ x client really connected |

➤ Grant for a “PP sub project”

For the infrastructure, after bidding investor signs a contract with successful bidder and will pay. Grant is paid in steps to the investor as soon as work is checked and confirmation of payment by contractor.

| Private + BOO | first payment | 2nd | 3rd | Poor |
|---------------|--|---|--|--|
| When | Treatment plant construction is completed | other investment as in FS completed | When at least 50 % of target connected | At least 30 poor connected |
| how much | XX² US\$ x total client target | YY² US\$ x total clients target | WW² US\$ x client really connected | ZZ² US\$ x client really connected |

➤ Facilitate access to credit

Often investor would not have enough capital, access to credit through a commercial Bank must be facilitated by the Project. Acleda with its many provincial, district and even towns branch (see detail of survey) would be a good partner. For success of the Project it is necessary to solve this issue.

➤ Grant for quality control equipment

We think it is still necessary to grant this equipment to encourage operators in a quality control process. 50% of minimum equipment (Jar Test and pH, CL test kit) and one year of daily control tablets (pH + Cl) is recommended.

➤ Pro poor component

A grant will be used to facilitate connections of poor families. It is recommended to comply with national strategy². Pro poor grant could be included in the global OBA approach as in above tables.

1.4 Strategic orientation C: Provide incentives 2 (technical assistance and support)

We recommend the Project to prepare the business environment (here the TA) to make the work easier for private investor (because they are not used to and they lack technical knowledge) and guarantee the final quality of design and construction. The project will have to invest more time at the beginning of process but will save a lot in conflict solving and monitoring.

➤ Organize provision of TA for Feasibility Study

We recommend the Project will pay for the feasibility study (including socio economic survey, estimation of total investment and business plan). The Project could decide to auto implement or to shortlist technical agency.

➤ Production of standard Technical design and bidding document (optional)

If the Project would like to facilitate future up scaling, we recommend it selects a TA to choose a number of standard equipment (treatment plant, water tower, clear water tank, etc.) adapted to the range of water production and town shape, etc. TA will validate these choices with MIME to be used for building and registration. TA will then produce these standard design and drawings and develop for each a standard Biding Document including BOQ and quotation update. This preliminary investment could be covered by the Project.

These documents will be provided at Province level for a fixed price together with all documents and forms required for registration.

➤ Organize provision of TA for Technical design and bidding

In some case some adapted drawings will be needed, and in all case a topography survey is required to define height of Water tower and dimension of pipes along the network. A shortlist of TA could be produced by the Project. Third to half cost will be supported by PWS candidate.

² Urban and Rural water sanitation policy, 2003.

- Organize provision of TA for work control Monitoring

We recommend work monitoring to be controlled and paid by the Project because this activity is directly connected to the payment of grants. Monitor TA will also check connections and issue certificate for payment based on OBA contract.

- Organize provision of TA for Technical and business management training

One or several suppliers could be selected to deliver technical and business management training and coaching. For more efficiency and consistency, it is recommended that the same suppliers are involved in supporting a Professional Association mentioned in orientation E4.

1.5 Strategic orientation D : Propose a variety of management models

In order to adapt to the different socio-economic contexts of the small towns targeted, we suggest that the Project proposes various management models, ranging from BOO to leasing contractual arrangements. Where a water market has been clearly identified, the BOO model (or concession (BOT) if public land is available) could be promoted with relatively low level of public subsidies. In this case the private operator, existing one or a selected one, would finance most of the investment and be in charge of service management, including technical, commercial and financial management. The commune would be involved in local regulation.

Where the water market is more limited, but the commune authority involvement is high, Leasing arrangements could be preferred. However, for such leasing arrangements the Project should require commune financial contribution as a condition to additional public subsidies. At this stage we consider that management contract is a difficult option as it put too much responsibility on the local authority and therefore require much capacity building activity.

Leasing Contract must be understood in a wide meaning not only in the (WB) standard model that has been used up to now in Cambodia. Duration, % of private contribution and ratio of payback could be tailored to different context, especially to this small towns and small market.

1.6 Strategic orientation E: Set the foundations for public-private partnerships

We also recommend to

- Organize a one shop service for registration (optional)

To facilitate registration and implementation of Water business development, a one window service at provincial level would be created. It could also be the first activity of PWS provincial the Association. It will be the place

- to get full information (form and cost) about registration and other legal documents or authorization (MOWRAM, Land Use, etc.)
- to receive standard drawings,
- to ask for credit opportunity, project support, etc.
- to deposit registration documents.

and will act has a provincial interface between local (town and commune) and national level.

- promote and facilitate PPP at provincial and national level

It seems quite clear from the survey that the local stakeholders, both from the private and the public sectors, lack of awareness on the opportunities and the advantages to partner together

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so as to facilitate the development or upgrading of water supply services. Bridging the gap between the public authorities (especially the communes) and the private sector should therefore be one priority of the Project. This could be achieved by disseminating the successful PPP experiences and through information sharing on the management, financial and technical options.

- organize Forum linking towns, PWS and investors

Another activity would be to organize forum or meetings to link demand and potential investors.

The Project could invite

- Commune authorities to present their town and promote reasons for investing in water business there
- unlicensed PWS to present their business and advantages to create a share company for development
- and licensed provincial electric providers, licensed piped water suppliers and other businessmen selected (ex. market manager through Ministry of Commerce, etc.).

- Facilitate PWS Provincial or national Water business Association

To engage private PWS in a process of professionalization and to help them to defend their corporation interest we recommend to support them in the constitution of provincial or national water business Associations.

2. Set of activities

See on Annex 4.

Annex 1 – Strategy proposed by 2005 MIME study

You would find in the following table a summary of strategies proposed by the team implementing the 2005 study. Additional expressed recommendations were :

- in each kind of town strategy could be also influenced by the pre-existence of an unlicensed water providers.
- the long term objective is to create a Commune Water Board.
- Awards of contracts for groups of town at province level could be considered as option to attract construction companies in the business.

Glossary

PWB = Province Water Board

CWB = Commune Water Board

| | Type 2 – Medium Towns | Type 3 – “Larger” Towns |
|------------------|---|--|
| Situation | served by opportunist or predators unserved or demonstrators | unserved or served by opportunists demonstrators, construction contractors |
| Priority | Focus in a decentralized manner | Focus at the national level scaling up is an issue |
| Strategy | <ul style="list-style-type: none"> ▪ Maintain a decentralized approach with either provincial or national support ▪ Help structure creation of CWB signing most appropriate service contract and channeling funds for province ▪ Province can mentor CWB on transitional period ▪ Encourage development of opportunist and demonstrators into more experienced operators ▪ Rely primarily on leasing contracts with grant component for pro poor extension under OBA approach | <ul style="list-style-type: none"> ▪ Group towns not only at bidding time but also for management to provide operators larger service areas (up to province level with PWB as group of CWB) ▪ Two phase strategy : (i) definition of optimum service area at local level and grouping suggested by central level; (ii) voluntary approach with incentives for towns grouping ▪ Centralized decision making: definition of priority areas, choice of contract and letting of contract at central level but local participation. ▪ Leasing or concession contract to increase % of investment up-front by private operators. |
| Opportunities | <ul style="list-style-type: none"> ▪ Direct support from central Gvt to speed up identification process and delivery | <ul style="list-style-type: none"> ▪ Centralized decision making to move at quicker pace and minimizing fragmentation of resources at central level ▪ Can attract a broad range of operators, including experienced domestic private or public operators (PPWSA) |
| Risks | <ul style="list-style-type: none"> ▪ insufficient donor or public funds available ▪ encourage private lending to CWB | <ul style="list-style-type: none"> ▪ Grouping could be time consuming and high rate of failure. |
| Responsibilities | <ul style="list-style-type: none"> ▪ Identify towns in this category and allocate % of fund ▪ Mobilize funding for financing investment mixed loans and pro-poor subsidies ▪ Define framework for providing technical assistance to towns and to operators ▪ Provinces to supervise contract preparation, selection of operators and co-sign contract. ▪ Technical assistance contracts (model contracts or guidance manuals for consultants) to be prepare at national level and pass down to province | <ul style="list-style-type: none"> ▪ Identify towns in this category and allocate % of fund ▪ Mobilize funding for financing investment mixed loans and pro-poor subsidies ▪ Define framework for providing technical assistance to towns and to operators ▪ MIME to supervise contract preparation, selection of operators and co-sign contract. ▪ Technical assistance contracts (model contracts or guidance manuals for consultants) to be prepare at national level and pass down to province ▪ Additional funding in case of grouping to encourage process. |

Annex 2 – Final list of 32 towns

| Final List | | | | | | | | | 3/23/2009 | | | |
|-------------------------|--------------------|---------------|-----------|--------------|--------|--------|---------------|-----|-----------|--------|----|----|
| Village | Town | District | Prov nb | Province | Taille | Type | Selection | New | type 2 | type 3 | | |
| Boeung Run | Samlout | Samlout | 02 | Battambang | 375 | | | 1 | 1 | | | |
| | Snoeng | Banan | 02 | Battambang | 427 | type 2 | 1 | | 1 | | | |
| | Khnach Romeas | Bavel | 02 | Battambang | 454 | type 2 | 1 | | 1 | | | |
| | Lvea | Bavel | 02 | Battambang | 360 | type 2 | 1 | | 1 | | | |
| Slab Kdaong | Slab Kdaong - Chob | Tboung Khmum | 03 | Kampong Cham | 502 | | | 1 | 1 | | | |
| | Spueu Chey Yo | Chamcar Leu | 03 | Kampong Cham | 582 | type 3 | 1 | | | 1 | | |
| | Svay Teab | Chamcar Leu | 03 | Kampong Cham | 927 | type 3 | 1 | | | 1 | | |
| | Dar | Memot | 03 | Kampong Cham | 750 | type 3 | 1 | | | 1 | | |
| | Kaong Kang | Ponhea Kraek | 03 | Kampong Cham | 998 | type 3 | 1 | | | 1 | | |
| | Kraek | Ponhea Kraek | 03 | Kampong Cham | 837 | type 3 | 1 | | | 1 | | |
| | Tuol Preah Khieang | Stueng Trang | 03 | Kampong Cham | 797 | type 3 | 1 | | | 1 | | |
| Kokir Thum | Baray | Baray | 06 | Kampong Thum | 596 | | | 1 | | 1 | | |
| | Chheu Teal | Sandan | 06 | Kampong Thum | 379 | | | 1 | 1 | | | |
| | San Kor | Kampong Svay | 06 | Kampong Thum | 406 | | | 1 | 1 | | | |
| | Andong Pou | Baray | 06 | Kampong Thum | 453 | type 2 | 1 | | 1 | | | |
| | Boeng | Baray | 06 | Kampong Thum | 409 | type 2 | 1 | | 1 | | | |
| | Chranleng | Baray | 06 | Kampong Thum | 559 | type 3 | 1 | | | 1 | | |
| | Trapeang Chrey | Chheu Kmou | Kaoh Thum | 08 | Kandal | 349 | | | 1 | 1 | | |
| Preaek Russey | | Kampong Kong | 08 | Kandal | 384 | | | 1 | 1 | | | |
| Preaek Andoung | | Leuk Daek | 08 | Kandal | 415 | | | 1 | 1 | | | |
| Preaek Kampls | | Kandal Steung | 08 | Kandal | 359 | type 2 | 1 | | 1 | | | |
| Kanhchor | Chioung | Chioung | 10 | Kratie | 911 | type 3 | 1 | | | 1 | | |
| | Pongro | Chioung | 10 | Kratie | 956 | type 3 | 1 | | | 1 | | |
| | Thma Kreae | Kracheh | 10 | Kratie | 741 | type 3 | 1 | | | 1 | | |
| | Chambak | Preaek Prasab | 10 | Kratie | 1,040 | type 3 | 1 | | | 1 | | |
| | Sambour | Sambour | 10 | Kratie | 448 | type 2 | 1 | | 1 | | | |
| | Sandan | Sambour | 10 | Kratie | 544 | type 2 | 1 | | 1 | | | |
| Stueng Thmei | Pramacy | Veal Veng | 15 | Pursat | 386 | | | 1 | 1 | | | |
| Talou | Talou | Bakan | 15 | Pursat | 300 | | | 1 | 1 | | | |
| | Boeng Khnar | Bakan | 15 | Pursat | 499 | type 2 | 1 | | 1 | | | |
| | Chheu Tom | Krakor | 15 | Pursat | 684 | type 3 | 1 | | | 1 | | |
| | Leach | Phnum Kravanh | 15 | Pursat | 708 | type 3 | 1 | | | 1 | | |
| Town from 2005 list | | | | | | | Total town | | 22 | 10 | 18 | 14 |
| Town from MIME 1st List | | | | | | | Total general | | 32 | | | |
| Town from MIME | | | | | | | | | | | | |

Annex 3

Description of signal used in the scoring and ranking tables

The ranking is based on the following field:

General and business environment

Technical feasibility

Estimation of water market

Local project support environment

For each field a number of criteria have been used, consisting in provided data or analysis of survey. Some field has been given a synthetic score. For each town details of scoring can be found in the town report.

| Business environment | | Comment | Unit |
|-------------------------|-------------------|---|---------------------|
| Town Shape | | | |
| CC | Crisscross | | |
| R1 | Road type 1 | one single line along the road | |
| R2 | Road type 2 | at least 1 small street // on each side of the road | |
| CR1 | Cross Road type 1 | simple crossroad, repetition of 2 roads type 1 | |
| CR2 | Cross Road type 2 | same as above with some crisscross pattern | |
| Size and density | | | |
| Pop | Total Houses | number of houses numbered in the map | house |
| Density | | Total houses/area covered by houses plus compound | pax/km ² |
| HD | High density | distance between houses < 5 m | % |
| MD | Medium density | | % |
| LD | Low density | | % |
| Growth | | average growth per year since 2005 for “old” towns | % |
| PubServ | Public Services | | score |
| Access | Accessibility | | score |
| EcoA | Economic Activity | | score |

- Number of houses in town and their spatial repartition is important as it would influence the level of investment, especially for the length and shape of network. Large agglomerate and dense town would be prioritized.

- Available public services (school, health centre, administrative institutions , etc.) and religious institution (pagoda, mosque, etc.) could affect the permanence and size of families, therefore the development of town.
- Accessibility score (i) the type and status of road crossing the town and (ii) towns of influence in the neighborhood or a contrario the remoteness. it influence the communication and ability of population to receive or sell goods or services.
- Economic activity in town is a synthetic score of (i) commercial activities including size of local market, (ii) access to financial services such as Bank branch or microfinance sub office and (iii) access to energy (fuel and electricity).
- Combination of these 3 scores gives a general business environment appreciation (low, medium or high)

| Technical feasibility | Comment |
|------------------------------|--|
| River or Lake | Distance from town and comments on water quality by population are considered |
| Drilled well | Existing drilled wells yield and characteristics are considered (if data collection possible) as well as present use by population and concerns about water taste. |
| Pond | Distance from town and comments on water quality by population are considered. |
| Recommended Water source | <p>Recommendation is made for the most realistic option which sounds also the less expensive one.</p> <p>In all situations in depth standard technical procedures to check quality and available quantity must be performed to confirm.</p> <p>Ponds will be first recommendation only if commune or local private suggest using an existing one; or proposing a piece of land to dig one.</p> |

Origin of recommended water source and technical feasibility scoring

- River and lake

Towns where raw water from a river or a lake can easily be used are the easiest place to develop technically a PWS project and would be given a high technical feasibility score.

- Drilled wells

Where Drilled water is the option, we sometimes recommend exploring possibility to find a suitable land to dig a pond to store rain water and/or flooding water, etc. Especially when yield from existing drilled wells are small.

High score when existing drilled wells are used for drinking by population and yield is good.

- Ponds

Only ponds with enough capacity already used for drinking by population would receive high score.

| Estimation of Water Market | | Comment | Unit |
|----------------------------|-------------------------|--|----------------|
| Wil | Willingness | Total willingness expressed by interviewees | % |
| CapC | Capacity for connection | Total of interviewees express 25 us\$ is affordable price for connection | % |
| CapT | Capacity for Tariff | Total of interviewees express 2 000 R/m ³ is affordable water tariff | % |
| WMQA | Water market estimation | Estimation of future total monthly m ³ sold during dry season at beginning of PWS based on survey | m ³ |
| WMSale | Existing Water market | Estimation of total m ³ sold by all water providers in one month during Dry season | m ³ |
| ElecG | Electric grid | Existence (green) and number of connections | pax |

Compare existing water market with results of survey – additional information such as electric power market and town economic activity is used to moderate and decide a final scoring (large, medium, small).

After technical feasibility this is the most decisive field for decision. In all case this appreciation based only on a few interview must be confirmed by a larger survey.

| Project support Environment | | Comment | Unit |
|-----------------------------|-------------------------|--|------|
| CapInv | Capacity of Investment | Declared capacity of investment by local investor | US\$ |
| LocAutS | Local authority support | quotation of Local authority support (high- medium-low) | |
| PubLand | Public land | Availability of a public land in town | |
| LocInv | Local Investor | Existence of a local investor who wants to create or develop a PWS | |
| PrivLand | Private land | Local investor is owner of an appropriate piece of land in town or near the water source | |

More supportive local authority could only express their willingness through identification of a potential public land to build a PWS. None of them mentioned they would use their Cfund.

A local investor with enough investment capacity (and sometimes land) is an important asset for the decision.

High score if there is public or private land available + a local investor express his interest and declare a convenient capacity of investment.

Medium score where exist only land or investor. Low score where none of this two.

| Final score and ranking | Comment |
|-------------------------|---|
| Final feasibility Score | from 1 to 4 according to 4 precedent scoring. |
| Ranking | from one and up according to feasibility tuning among same scoring in the Province. |

Annex 4 – Detailed set of activities

| | Strategy | | Activities | Implemented by | comments |
|-----------|--|---|---|--|--|
| A | Build on local initiatives With enough financial capacity and without opposition from commune a local investor will be prioritized | 1 | confirmation of sub project through a feasibility study (FS) (i) survey for market size (ii) validation of raw source (iii) definition of PWS equipment (old and new) (iv) estimation of total investment (v) business plan to define minimum capital return duration and water tariff | TA from Shortlisted Engineering Company and NGOs | Succession of Activities must be harmonized and similar to the one applied to Licensed willing to expand |
| | | 2 | Presentation of Feasibility study to Competent Institutions at Provincial level for non objection Commune, District, PDIME, and submission at national level (MIME) for non objection on Technical design, tariff and License duration. | Province ? + PDIME | |
| B1 | Propose an incentive system equivalent to ~ 30% of total investment to attract private fund (see details in focus on incentives) | 3 | Launch Expression of interest for investors and Operators Selection based first on finance capacity and 2nd on technical | Commune with support of FS TA | Investor must precise own funds or shares and requested Bank loan see activities in F |
| | | 4 | Based on Investor selected , update FS = (UFS) map with land for construction, topography survey for final design updated Business plan, Adapt local service delegation contract prepare sub project Financing agreement | TA from Shortlisted Engineering Company and NGOs | Including basic equipment for quality control Description and periodicity of minimum water quality test is mentioned in Contract Participation to a training and coaching program is compulsory and mentioned in contract. |

| | Strategy | | Activities | Implemented by | comments |
|----------|---|----|--|------------------------------------|--|
| D | Propose a variety of management models | 5 | Official approval of Service Delegation Contract by Competent Institutions at Provincial level Commune, District, PDIME, Province and national level MIME (Technical design and License) | PDIME | |
| | | 6 | Approval at national level (MIME) - deliver Kolka on Technical design, tariff and License duration | PDIME + MIME | |
| | | 7 | Signature of sub project Financing Agreement by all funders. | the Project | If public land is used for construction appropriate owner must also sign |
| | | 8 | Finalise design and drawings of all equipment Draft as many bidding document as required for construction of full system | TA from Shortlisted EC and NGOs | Develop a set of standard design and drawings For water treatment, Water tower, clear water tank, sludge pond, etc. and negotiate a standard cost to adapt to specific situation and draft bidding documents |
| | | 9 | Launch biddings for construction and selection of contractors | with TA support | organise at the same time |
| | | 10 | signature of contract between investor and contractor(s) | | in case of BOT final owner sign as witness |
| | | 11 | Monitoring of works | shortlist of Monitoring Cy | |
| | | 12 | Training of Manager in basic financial and management matters and operator in basic technical matters | shortlist of training Institutions | |
| | | 13 | Training of Communes in their new roles of guarantee of Public service delivery through respect of terms of contract | | |
| | | 14 | Population hygiene awareness and social marketing co financed by Investor ? | NGO or Public Dpt | Commune must include in its budget and/or coordinate with PDRD activities and/or Health (village health worker) |

| | Strategy | | Activities | Implemented by | comments |
|-----------|---|----|---|----------------|----------------------------|
| B5 | Include pro-poor measures in program to comply with 2003 Water policy recommendations | 15 | List of poor Households provided by Commune | Commune | using Mo Planning standard |
| | | 16 | | | |
| E | Set the foundation for public private partnership | 17 | Negotiation with appropriate Institutions to define standard price and procedures of legal registration | the Project | |
| | | 18 | Investor fill request form and submit to appropriate Institutions Commune and District Stamp and signature and Provincial Authorization delivered by PDIME | PDIME | |
| | | 19 | Official License delivered by MIME | MIME | |

| | Strategy | | Activities | Implemented by | comments |
|-----------|------------------------------------|---|---|------------------------|--|
| B3 | Facilitate access to credit | 1 | Negotiate special credit line for small medium enterprises having slow capital return but correct profitability amount from 5,000 to 20 ,000 US\$ duration 3 to 5 years could be enough Interest rate to be fixed | the Project | ACLEDA would be the best partner because of its wide geographic presence |
| | | 2 | Assist Investor for loan documents | TA in charge of UFS | |

| | Strategy | | Activities | Implemented by | comments |
|-----------|---|---|--|--|---|
| E2 | Linking stakeholders in Business | 1 | Identify potential investors in Province | the Project , Province and PDIME | through appropriate Media and using List of licensed PWS and Electricity Prov. Look also Provincial Dpt of Commerce to identify Market managers, etc |
| | | 2 | Promote idea of shared capital company with existing PWS | the Project | |
| | | 3 | Organise Provincial Meeting with selected Towns (with or without PWS) and potential investors and Official representative, | the Project , Province and PDIME | PWS and/or Commune will present their town to attract private and/or public investor |

| | Strategy | | Activities | Implemented by | comments |
|----------|---|---|---|-----------------------------------|----------|
| H | Facilitate access to raw water Propose an incentive system to attract public and/or private fund to solve the problem of Raw water. (see details in focus on incentives) | 1 | Define a general financial agreement with Gvt for this issue or specific agreement at Provincial or case by case basis. | the Project | |
| | | 2 | preliminary technical study to define best option for raw water source and draft TOR for appropriate test (drill, yield, superficial aquifer and soil permeability, water chemical analysis, etc.) | TA Shortlist EC and NGOs | |
| | | 3 | Launch bidding and selection of implementing company | the Project | |
| | | 4 | Technical work and Report on water source testing | Shortlist? | |
| | | 5 | Technical Decision on water source creation and tuning financing | the Project | |
| | | 6 | Then follow same steps as from A1 | | |

Gret –

| | Strategy | | Activities | Implemented by | comments |
|-----------|---|---|--|-----------------------|---|
| B1 | Propose an incentive system equivalent to ~ 50% of total investment to attract public fund (see details in focus on incentives) | 1 | Check willingness and capacity of Commune, District and Province and MIME to invest a minimum of 30,000 to 50,000 US\$ in a water system | the Project | Sometimes Commune can seek and find additional funds from other NGOs, UN etc. |
| | | 2 | Then follow same steps from A1 | | |

Annex 5 – Town priority and strategy

Town Priority and strategy

6/5/2009

| Name of town | District | Province | Prov Rank | Houses | PubLand | Privland | Tech | Town Type | Prioritisation | Comment |
|--------------------|---------------|--------------|-----------|--------|---------|----------|-----------|----------------------------|--|--|
| Sambour | Sambour | Kratie | 1 | 610 | No | Yes | | PWS with H funds | Project can start quickly apply standard set of activities based on Strategy A to E from A1 | District town |
| Chheu Khmau | Koh Thum | Kandal | 3 | 702 | No | Yes | | No PWS but H Investor | | water market medium |
| Thma Kreae | Kratie | Kratie | 3 | 701 | Yes | Yes | | | | water market medium |
| Leach | Phnum Kravanh | Pursat | 1 | 820 | No | ? | | PWS with medium fund | | District town |
| Chambak | Preaek Prasab | Kratie | 2 | 872 | Yes | Yes | | | | water market medium |
| Pramaoy | Veal Veng | Pursat | 4 | 395 | No | ? | | | | District town |
| Lvea | Baval | Battambang | 1 | 1,094 | Yes | ? | | No PWS but M Investor | | private land and credit? |
| Boeng Klmar | Bakan | Pursat | 2 | 774 | No | ? | | | | need private land investment first |
| Leuk Daek | Koh Thum | Kandal | 2 | 794 | Yes | Yes | | | | must check needs for credit |
| Chheu Tom | Krakor | Pursat | 3 | 899 | No | ? | | PWS with Small fund | | high potential development |
| Kampong Kong | Koh Thum | Kandal | 1 | 1,383 | Yes | Yes | | | already open to shared company | |
| Pongro | Chhloung | Kratie | 5 | 970 | No | Yes | | | willingness to pay medium | |
| Sandan | Sambour | Kratie | 4 | 920 | No | Yes | | | need external investor | |
| Svay Teab | Chamcar Leu | Kampong Cham | 1 | 1,260 | No | ? | Social? | No PWS but S Investor | needs to solve access to credit first Apply Strategy B3 or linking demand to investor and shared Company Apply Strategy E2 | existing lake but reluctance to use it |
| Kanhchor | Chhloung | Kratie | 6 | 1022 | No | No | | PWS without local Investor | | good market |
| Slab Kdaong - Chob | Tboung Khmum | Kampong Cham | 4 | 480 | No | No | DW | | | needs more discussion at local level |
| Snoeng | Banan | Battambang | 3 | 871 | No | ? | Reservoir | No PWS but S Investor | Existing raw water source quantity to be confirmed | DW 3 to 4 m ³ /h - good potential and strong willingness |
| Khmach Romeas | Baval | Battambang | 2 | 738 | No | ? | Reservoir | | | existing public pond (1 km) |
| Andong Pou | Baray | Kampong Thum | 3 | 1,473 | Yes | No | Pond | No PWS No Investor | | existing big reservoir (1 km) |
| Dar | Memot | Kampong Cham | 2 | 1,260 | Yes | ? | DW | | potential raw water source need testing first and estimation of production and cost estimation Apply Strategy H | lake at 3 km or drilled well but iron zone |
| Boeng | Baray | Kampong Thum | 1 | 1,088 | Yes | Yes | Pond | No PWS but S Investor | | there are DW with high yield but low willingness to pay |
| Sankor | Kampong Svay | Kampong Thum | 2 | 1,094 | No | ? | Pond | | | needs infiltration pond near canal (2km) |
| Kraek | Ponhea Kraek | Kampong Cham | 7 | 846 | No | ? | DW | | | needs infiltration pond near canal (1km) |
| Spueu Cheyyou | Chamcar Leu | Kampong Cham | 6 | 550 | Yes | No | DW | | | competition with private dug wells |
| Chrantieng | Baray | Kampong Thum | 4 | 1,122 | No | No | Pond | | | needs infiltration pond near canal (1km) |
| Kokir Thum | Baray | Kampong Thum | 6 | 522 | No | No | Pond | No PWS No Investor | | competition with spring water |
| Kaong Kang | Ponhea Kraek | Kampong Cham | 5 | 1,030 | No | No | Pond | | | DW 3 to 4 m ³ /h - HH competition |
| Preaek kamps | Kandal Steung | Kandal | 4 | 616 | No | No | Preaek | | | DW 4 to 5 m ³ /h - HH competition |
| Ta Lou | Bakan | Pursat | 5 | 335 | No | ? | Pond | No PWS but S Investor | | needs new pond - dug well competition |
| Ou Runduol | Phnum Proek | Battambang | 4 | 299 | Yes | No | Pond | | Irrigation reservoir to rehabilitate dug well competition | |
| Tuol Preah Khleang | Stueng Trang | Kampong Cham | 3 | 660 | Yes | No | | No PWS No Investor | community project Apply Strategy B1 | water quality specific problem ? |
| Chheu Teal | Sandan | Kampong Thum | 5 | 510 | No | No | | | | very close to PNP ? |
| | | | | | | | | | | expensive needs a new pond only for a community project |
| | | | | | | | | | | only for a community project |
| | | | | | | | | | | Phkoam lake is good option |
| | | | | | | | | | | strong willingness - community project |
| | | | | | | | | | | small town and market |