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CAMBODIA MSME PROJECT INTERIM ASSESSMENT OF BIODIVERSITY, ECO- TOURISM AND WATER COMPONENTS

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This publication was produced by Del McCluskey, Managing Director for Environment and Energy Sector, DAI for review by the United States Agency for International Development.

CAMOBODIA MSME PROJECT

INTERIM ASSESSMENT OF THE BIODIVERSITY, ECOTOURISM AND WATER COMPONENTS – MAY 2011

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Author: Del McCluskey, Managing Director, Environment and Energy Sector, DAI

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1. Update on the Water Value Chain

Current Status

Total number of contracts with private operators (17 from first round, 9 new)	26
Number of WSPs that have completed their contracts:	12
Number of contracts still in progress	14
Number of households now receiving clean water	14,531
Number of people estimated to be directly benefiting from clean water	72,655
Estimated number of households still to be connected	5,472

Key Questions

1. How can we ensure that WSPs will maintain water quality after the project ends? We have two potential options:

a) Work with MIME and Provincial DIME offices to conduct periodic testing. Questions exist whether: the DIME offices have the authority and ability to carry out this function: whether MIME's lab will maintain its quality testing service; and whether having the government fully involved will create bottlenecks that impose higher costs on private operators.

b) Explore with Phnom Penh Water whether they could provide this service on paid basis in return for a certification that the private systems delivered "Phnom Penh" quality water.

2. How can we help the small-scale private operators continue to grow?

Key issues will that will continue to constrain private operators include financing and access to technical/operational expertise. For the former, we don't have many answers. The current financial market in Cambodia is not appropriate for water utilities – require long term loans. This will change over time as banks become more aware of the low risks presented by these businesses.

Continued access to technical expertise can be accomplished in two ways: through an association approach and through the purchase of technical support from another utility such as Phnom Penh Water. There also may be opportunities to tap into the utility twinning program (WaterLinks) supported by the RDMA.

3. Significant Policy Issues to Address?

Short License Period. The current three-year license potentially makes the private WSPs vulnerable to having their systems expropriated. However, in discussions with the WSPs, most are not concerned about this as they are well connected with the Commune Councils and others in their local communities, and with current laws about ownership, it could be difficult for an outside person to take control of a well performing WSP. An even if they did, it is likely they would not be able to use the existing piped network. From the RGC's perspective, they do not see an issue, and Tan Sokchea is currently unwilling to take on any issues regarding the licensing procedures/term or testing of water quality.

4. How to strengthen the voice of private WSP? Estimates are that about 300 private WSPs exist in Cambodia. MIME has registered between 100 and 120. MSME has active relationships

with about 50. We know that the private WSPs are now talking to each other, and we see growing interest among non-MSME WSPs to participate in cross-province visits. Some private WSPs have expressed interest in forming a WSP association, but no one is willing to step forward and take the lead. One option would be to explore the formation of an association that encompasses both private and public WSPs as the both likely face similar operating issues.

5. Spread Effect. While we know that WSPs are talking to each other, and an increasing number are participating in cross-province visits, we don't know whether the project is having any impact beyond the 26 WSPs currently working with MSME. Recommend we analyze this question and document any spread effect as this would be a good success story as well as provide insights into future investments in the sector.

6. Differences between Round I and II. In Round I, several of the WSPs we worked with had their beginnings from the MIREP or World Bank programs. As a result, they had large investments in water treatment and storage. In Round II, our objective was to reach more poorer and distant households, and to leverage greater funding from the private sector. In Round II, we are working with more of the purely private WSPs – family businesses. To our surprise, in Round II we achieved some cost savings compared to Round I. In Round I (average cost per household is \$66 compared to \$70 under Round I), and it appears that the WSPs engaged in Round II are more aggressive at connecting the more distant and poor households.

2. Update on the Biodiversity Conservation Strategy

Current Status

MSME II currently works with 31 communities in different areas of natural resources management. Of these, 12 communities function under Community Forestry Agreements, 11 under Community Protected Area agreements, 2 under Community Fishery Agreements, and 5 still being defined. In terms of the value chains, MSME supports community work on three main value chains: resin, honey and now eco-tourism.

Resin. PACT led the organization of four (4) resin enterprises. These four have raised some capital (between \$25 and \$200 each), and now serve as an alternative market compared to the traditional local buyers for producers to sell their resin. These enterprises are governed by a 5 person committee selected from among the members. The committee collects market information from multiple sources, identifies the best market price and purchases resin from the producers at that price. It then organizes the sale in the market. The business model has several weaknesses:

- Assumes that traditional local buyers are swindling the producers;
- Committee members currently receive no salary or compensation for their work.
- Enterprises assume the marketing risk – they pay producers at the rate they find in the market, but may often face hours or days between when they pay for resin and when they can sell it themselves. This poses a significant market risk should the price shift during this period.
- They are not structured to accumulate capital. This undermines their ability to weather market fluctuations and sustain operations.

- Transportation poses a significant issue. In some provinces, these enterprises cannot transport resin without a permit. PACT was helping these enterprises put in their applications for transport permits.

Recommendation: Move away from this business model as it looks unsustainable nor based on sound business principles.

Honey. MSME works with 16 community-based forestry groups to: (1) implement more sustainable harvesting of wild honey; (2) help honey collectors to understand the quality requirements and prices of different honeys in the domestic market; (3) improve initial processing (filtering) of collected honey to improve its value to wholesalers, and (4) connect the communities to wholesalers that offer access to reliable, higher value domestic markets. The communities, with support from the NTFP Support Program, and Nature Wild have formed the Community-Based Honey Enterprise (CBHE) Federation. CBHE has more than 500 member honey collectors. CBHE purchases honey from individual members in each participating community in five provinces. CBHE then sells the honey to CEDAC and other honey traders. CBHE is developing quality, social and quantity standards, and, with the help of NTFP-SP provides training to honey hunters in honey collection and initial processing. CBHE does annual inspections to ensure the communities are following their recommendations on sustainable harvest and initial processing practices. At the community level, CBHE earns profit on the purchase and sale of honey. For example, in Toap Cheang, CBHE:

- Pays honey collectors \$6.4 per liter of raw honey.
- Sells the honey to CEDAC for \$8.3/liter
- Of the \$1.90 in revenue, 50% is used to cover the costs of CBHE operations, 15% is allocated for capital expansion and 35% is used to cover the costs of forest protection/patrolling by community members.

Based on interviews with honey harvesters from the Toap Cheang community in Koh Kong province, they have 78 members who gather honey. Honey hunters will establish between 50 and 150 rafters in their areas. They hope to get 50% or more occupancy by bees. The actual honey produced by any individual hive varies widely depending upon environmental conditions (rainfall and flowering). On average, honey hunters collect between 5 – 6 liters per occupied rafter in two to three harvests during the season. This translates into incomes of between \$600 - \$2,000 per year from honey sales.

The community has zoned the honey collection areas, and each member has an area where they collect honey. Theft remains a problem, but from the discussion among community members, appears to be improved with their organization and training. Honey collectors were shown a bee box, that while not suited to the migratory *Apis dorsata* that colonizes rafters, would work for the *Apis serena*, another species also found locally. Boxes offer an alternative approach to bee cultivation and honey collection

The honey market. CEDAC started its honey business in 2008 in partnership with NTFP-SP and WWF. The first year it purchased 100 liters of honey. In 2011, it expects to purchase 5,000

liters and plans to increase this to 7,000 to 10,000 liters in 2012. Besides aggregating honey, CEDAC dries honey to 24% moisture content, and then packages in various size containers for sale in the local market. It labels honey by the province of origin as honey from different areas has very different flavors. It sells all honey processed in the local market through its 10 shops and through local supermarkets.

3. Linking Eco-Tourism to Biodiversity Conservation

Eco-Tourism. The team is shifting its Tourism value chain strategy to create a stronger linkage with the biodiversity conservation sites. MSME is wrapping up work with the six Hidden Treasure Cambodia sites that it began to work with last year. The team has recently assessed the potential tourism opportunities and challenges for the 31 community forestry sites, and from this assessment, identified 10 that offer potential for eco-tourism development.

Based on the team's own assessment, most of the local communities in and around the areas targeted by Hidden Treasure and the biodiversity sites are ill prepared to lead/manage tourism development and investments. Past efforts by MSME with the Hidden Treasure sites focused on:

- Helping communities to understanding their potential tourism assets and how these assets could be developed,
- Linking communities with tour operators and other organizations in the value chain that can advise on the development of the assets, and
- Providing training to some community in areas such as food preparation and housekeeping, and helping the communities develop marketing materials that tour operators could use to market the areas.

In the more detailed assessment of the 10 community-forestry areas that had some eco-tourism potential, the local communities in these areas are also ill prepared and lack the capital to develop these areas. While most of the Hidden Treasure sites offer diverse recreation opportunities and thus excellent potential for single or multi-overnight stays, the 10 community forestry areas look to be better suited for short visits to areas of particular interest such as waterfalls, forest treks or the collection/processing of NTFPs. Given the very low level of community capacity and the time remaining the project, it seems that our approach at this stage should focus on:

1. Identify those sites that offer significant and diverse attractions for both domestic and international tourists, and work to link communities in these areas with local and international

investors that can bring the technical and business expertise and investment capital required to develop these areas. In these cases, our approach can concentrate on:

- Helping communities and investors reach a mutual understanding of the type of tourism opportunities their area offers to domestic and international tourists, and develop a plan for its development;
- Help communities understand the investments required to develop these opportunities - hotels, restaurants, recreation services, etc, and what additional infrastructure (i.e. trails, bridges, telecommunications/internet links, etc) will be required;
- Address any community concerns about protecting their land and resource rights while providing investors with suitable incentives – such as long term leases and concessions – to construct appropriate hotels, restaurants, or other tourist services;
- Work with investors and communities to identify other ancillary services that generate labor and income opportunities for diverse community members (tour guides, equipment operators, suppliers of locally produced fruits and vegetables, handicrafts, cultural shows, etc).

2. While many of community forestry sites are poorly suited to be developed into significant tourism attractions, they do offer opportunities for short-term visits. Such “boutique” sites could be developed especially if they are in close proximity to major transportation routes or other tourist areas that attract many visitors. For these areas, again it seems that in the time remaining our focus should be on linking these communities with tour operators and potential investors that can work with the communities to develop specific tourist opportunities and services – hiking trails, restaurants, handicraft shops and/or guided trips and others, that will generate income and jobs for local community members.

Thus, in sum for both types of tourist sites, it seems that our focus should be on helping the communities to: (1) identify potential investors; (2) facilitate introduction between communities and potential investors; (3) help communities think through possible agreements with outside investors that will protect community rights while creating sufficient incentive to the investors, and (4) help link in other value chain members required to fully development the tourism asset. Ponreay and other members of the tourism and biodiversity teams are already looking at these approaches.

4. Other Tasks Carried Out During This Assignment

1. Review of the Ecosystem Monitoring Tool.

MSME supported the design of an ecosystem monitoring tool by Live and Learn. This tool is now being tested by PACT in ten CFA sites. At each site, two people conduct the monitoring. While they are expected to collect information on three species each of birds, mammals, reptiles, fish and insects, most community monitors only collect information on birds, mammals and reptiles, and NTFPs. PACT has paid these local community monitors \$10 per month to collect the information. With the termination of the PACT work, these payments will stop. According to PACT, many of the community monitors are willing to continue collecting information without further payment. Based on my discussion with PACT, the main issues with the L&L methodology and current organization of the information system are:

- Who monitors the quality of data? Essentially no one. There is no verification of information collected by local communities. PACT recently worked with Bird Life International to carry out training in bird monitoring in the Oddar Meanchey REDD area and found that many villagers cannot differentiate between different bird species. This prompted Bird Life to create a photo field book to aid the community monitors in bird identification, but without binoculars they will still have challenges differentiating between birds with similar color patterns. I assume that community monitors in the other biodiversity sites face similar challenges, so the data collected has limited scientific value.
- Who keeps/owns the data? This is a significant unresolved aspect. Right now the villagers submit their data to PACT. But with PACT closing down, it is unclear what will happen next. PACT recommended that the participating villages submit the information to the local commune heads and local FA representatives. Based on experience in other countries, if this data is not directly useful to the communities and is not required by the Government as part of an official periodic reporting requirement, its collection will likely stop once the external interest (i.e. PACT and MSME) goes away.
- Complexity of the Live and Learn information forms. Many of the villagers have expressed trouble filling out the forms. There are some similarities with a form used by FA, but the data fields are more extensive and require that information collectors be literate. This further undermines the likelihood that data will continue to be collected once project support ends.
- Ability to edit, modify or adapt the L&L system for data storage and analysis. PACT abandoned any attempt to modify the electronic data system developed by L&L. They could not find anyone who could explain how the system actually work nor how they

could edit the fields as L&L had used a non-conventional software in developing the system. As a result, PACT stopped using the system and organized data collected in Excel spreadsheets.

Given the above issues, it is likely the system will be dropped once MSME support ends. It is worth a discussion with FA and potentially other donors and NGOs to determine whether this information is useful to FA, commune councils and communities, and if so, clearly define:

- a) How this information will be used and by what organization;
 - b) How will information be collected and distributed;
 - c) What are the incentives/penalties for collecting/not collecting the information;
- and
- d) What continuing support does FA or others need to use the information, or to modify and institutionalize the information system.

If FA and others are not interested, then we should drop further support for this activity.

2. Review of the draft Prey Lang Assessment Report.

The Advanced Engineering (AE) report clearly outlines the approach used by the assessment team to carry out the rapid socio-economic assessment. They focused on three main analytical approaches and looked at four distinct scenarios for each - baseline (business as usual); complete conversion, complete preservation, and conservation-oriented utilization. For each scenario, AE used the data available to derive the following comparison analyses:

- Total economic valuation for both direct use and indirect use values of different resources;
- Benefit cost analysis, and
- Sustainable Matrix methodology that uses two main factors (Importance and Value) and adjusts these using a confidence level estimate to estimate comparative values for four different scenarios in terms of their social, environmental and economic sustainability.

Given the dearth of real data available to make quantitative calculations the AE team has done an admirable job of using these tools to analyze and draw conclusions about the four different scenarios. There are some specific questions with some of AE's calculations, and with their discussion of assumed best and worst case scenarios. Finally, the final recommendation needs to be strengthened and help direct the Forest Administration in how it can use the report and the analytical tools presented in the report to introduce greater use of such tools in economic decision making as it relates to the management, conversion and/or preservation of forest lands. Specific comments by section are discussed in greater detail below by Chapter.

Chapter 2.0 -Methodology. Provides a good outline of the approach taken by the team in developing the different socio-economic analyses.

Page 21: Title “Indicator Paramets” to Indicator Paramters.

Chapter 3.0 - Study Area. Good physical description of the area and how specific subareas were identified for further analysis.

Chapter 4.0 - Baseline Conditions

Page 67. The statement that the average annual sediment load measured at Kratie is between 66 and 160 metric tons seems very low, given the high level of sediment normally carried by the Mekong.

Page 68. “The information is insufficient to assess the effect of the increase in sedimentation as a result of deforestation

Page 80. There appear to be several problems with the numbers reported for fisheries production and value in Cambodia in this section. For example, report states that fisheries contribute up to 10% (\$9.8 million) of the official GDP. From other sources, the approximate value of Cambodia’s GDP is about \$11.4 billion (CIA Factbook). Thus, if fisheries represent about 10% of GDP, they would need to contribute at least \$980 Million and maybe upwards of \$1.1 Billion to official GDP.

The report states that the lower Mekong fishery produces about 3 million tons worth \$1.4 million. This means that fish are worth about \$0.47/ton. Using the above \$980 Million figure, the cost per ton would be about \$326 per ton. On page 83, we use an estimated value per ton of \$2,350.

Page 81. If 2,000 MT (the estimated catch in Stung Treng Province) is equal to 1.6% of the national catch, then the national catch would be about 125,000 Tons, This seems like a very small number when on page 80 the report talks about production from the Tonle Sap ranging between 230,000 and 422,000 tons., and the overall 3 million ton estimate for total fishery production in the lower Mekong which covers Cambodia and the Vietnam delta.

Community Fishery. States that community fisheries benefits 381,559 people (114,284 households). This implies only 3.3 people per household. This seems to understate the number of people potentially impacted compared to average households sizes of 5 people used in other studies.

Page 82. First bullet. Forest area is based on total

Page 85. In Table 4.24, the report states the average expenses per national visitor/per(using \$22/day including transportation). On Page 84, it states an average expenditure of \$10/day for local tourists. This implies that local tourists spend \$12 per day on transportation. Is this correct? Similarly, on page 84, the report states that MOT statistics show international tourists spend about \$112/day. In table 4.24, the report uses an average cost of \$118 for 2 days or \$59/day including transportation. This needs some clarification or further explanation as to why the team chose a much lower number than is reported by the MOT.

Page 89. Section 4.4.8. The report uses an estimated benefit of \$130/hectare for soil and water conservation, and a total area of 760,000 ha. Yet in the narrative, states that the “total economic value of watershed protection and soil erosion for evergreen and semi-evergreen (567,608 ha), is approximately \$99 million for 2010”. Either the estimated value needs to be lower (i.e. \$73.8 million), or the calculation must include the dry deciduous forest as well which would then contradict the reference study findings.

Chapter 5.0 - Assessment Scenarios

Page 101. Figure 5.4. The chart shows that tourism and recreational opportunities would increase under the forest conversion scenario. This contradicts the statement on page 97 where the expectation is that tourism would be “repulsed” by forest conversion.

Page 103. Several confusing statements in this analysis. For example. In the 3rd paragraph. “Based on its relatively strong national economic growth, without the revenues from logging currently on hold; it might be assumed that Cambodia’s ability to pay for the preservation of the Prey Lang forest is good.” In the 6th paragraph, last sentence ..”That is the opportunity costs of forestation. Be including the opportunity costs, the benefits of the services to society should result in a net benefit in access of Scenario 1”. These need rewriting to clarify the points being made.

Chapter 6.0 - Design Criteria

The TEV and BCA are good summaries of information in previous chapters. The report introduces a new analysis – Assumed Best Case and Assumed Worst Case on page 114. This discussion is incomprehensible. It needs some tables or other tools to help the reader follow the main points. Recommend rewriting, or eliminating since this is the first place the concept is introduced, it has no quantitative analysis to allow the reader to follow the discussion, and is never mentioned again. The discussion of IRR is pretty tenuous given the weakness in the overall data. Hard to see that a 1% difference in IRR is significant in this situation to support the final conclusion that conservation is the better choice over preservation.

Chapter 7.0 - Conclusions and Recommendations.

The final conclusion is the most pragmatic given the current situation. However, the final recommendations are so general as to be meaningless. This part could use some greater specificity. Such as: Train FA in the application of methodologies used in the report, so they can further develop and incorporate this analytical approach into economic decision making by the Council of Ministers.