

TERMS OF REFERENCE

Individual Contractor

1. Assignment Information

Assignment Title:	International specialist: background research on the Phnom Kulen National Park in preparation for Payment for Ecosystem Services
Cluster/Project:	Policy and Advocacy
Post Level:	Senior Specialist
Contract Type:	Individual Contractor (IC)
Duty Station:	home-based and non-home-based (Siem Reap and Phnom Penh)
Expected Place of Travel:	Siem Reap and Phnom Penh
Contract Duration:	90 days, and from August 31 2017 to June 30, 2018

2. Project Description

In 1993 the Royal Government of Cambodia (RGC) issued a Royal Decree designating 23 areas, covering about 3.3 million ha (18.3 % of total land area), as protected areas. In 2015-16 the RGC has increased its total conservation area to approximately 7.5 million ha that includes 45 landscapes and three Biodiversity Conservation Corridors. Cambodia has brought approximately 41 per cent of its total area under conservation management.

These areas are governed by a regulatory framework that includes the Constitution of Cambodia (1993), the Protected Area Law (2008), and the Law on Environmental Protection and Natural Resources Development (1996). These regulations are complemented by the National Protected Area Strategic Management Plan (NPASMP). The NPASMP is an important policy instrument to provide directions, strategic objectives and action plans with the aim to achieve effective management of Protected Areas.

Among other things, the NPASMP identified “inadequate government funding” as a major challenge in ensuring effective management of Protected Areas. It further highlighted the urgent need to develop a sustainable finance plan using a diversified set of funding sources to address the funding needs.

In October, 2016, the RGC officially approved advancing the dialogue on Payment for Ecosystem Services (PES) as one of new sustainable financing options for concerning Protected areas, and also to address the funding needs identified by the NPASMP. This decision included a proposal to implement two PES pilot projects in Kbal Chhay in the Preah Sihanouk province in Preah Jayavarman-Norodam “Phnom Kulen” (Phnom Kulen National Park) in the Siem Reap province.

One of the proposed pilot sites, Phnom Kulen National Park, is well known for its history, its cultural heritage sites, and its ecological importance. It is the most sacred mountain in Cambodia and the birthplace of the Cambodian Kingdom with more than 50 sacred ancient temples. Its ecosystem provides critical habitat for a number of globally threatened species and plays a vital role as a water source for the Siem Reap town and the aquifer that maintains the stability of the Temples of Angkor.

In June, 2017, the Ministry of Environment requested the United Nations of Development Programme (UNDP) to lead feasibility studies in designing Payment Ecosystem Services (PES) in Phnom Kulen National Park and to contribute to the design of a PES policy in coordination with the Conservation International.

One of main components of the proposed feasibility studies is an in-depth research of the Kulen Mountain, to collect background information to be used for designing PES. These include

- Historical resources and land uses to generate maps of watershed with past and current land uses, land tenure and socioeconomic conditions;
- General socio-economic situations of areas and major livelihood activities

- Institutional and governance analysis in relation to the national park
- Key ecosystem services related to water, eco-tourism, continued life-support systems, and cultural values
- Key stakeholders and target groups which may be interested in financing a PES, and map their interests, including any existing PES practices;
- Possible payment transfer and distribution mechanisms; and
- Key issues and challenges government, companies, and communities are likely to face in the PES engagement

3. Scope of Work

The main tasks of the Consultant are two folds. The first is to collect background information to be used for designing PES in the Phnom Kulen National Park and the second is to contribute to ongoing and future discussions in designing, and operationalizing PES.

Part I: Background research:

Background research consists of three main components 1. land and resource use analysis, 2. socio economic analysis, 3 institutional and governance analysis, and 4. policy recommendations.

1. Land and resource analysis in the Kulen Mountain.

Main objectives of this section are to 1) visualize major lands uses and changes over time, 2) identify key environmental, economic and cultural values and services of the Mountain, 3) identify major threats to the ecosystem of the mountain and 4) present possible environmental risks of deforestation and forest degradation. This analysis should not be limited but include:

- Latest maps of major land uses including locations of temples, roads, village settlements (legal and non legal), agriculture fields, tourism sites, water networks (streams, rivers), habitats of endangered species.
- Maps and pictures to visualize the changes in forest cover, agriculture lands, village settlements, and roads and other infrastructures (to trace changes over time)
- Analysis of key environmental, socio-economic and cultural services and goods which the Kulen Mountain provides to people in PKNP and the surrounding landscape (e.g. water, timber, firewood, Non-Timber Forest Products, Medicinal plants, wildlife, archaeological values, agriculture, and ecotourism). This analysis should capture multi dimensions of ecosystem services (e.g. Kulen water has many dimensions: as a necessity, as a commercial item, as critical for agriculture/livelihoods (upland/lowland), as spiritual/political value (Kulen water is used at Royal Ceremonies), and supporting the foundation of Angkor Wat.
- Assessment of the state of the Phnom Kulen in terms of ecosystem services that are slowly dominating the ecosystem at the expense of other services, to capture the notion of trade-offs (cashew vs water)
- Detailed analysis of major factors affecting the ecosystems of the Kulen Mountain with pictures. These factors should be also categorized by the level of significance
 - Direct factors (e.g. Land encroachment, slash and burn agriculture, Illegal logging for timber, Illegal hunting of wildlife, over use of pesticides, wastes, pollution from vehicles)

- with an analysis of the drivers behind these illegal logging, and emerging dominance of cashew
 - Indirect factors (e.g. Law enforcement, tourism concessions, equipment)
- Possible impacts of deforestation and contamination of Kulen Mountain, drawing on narratives of villagers when and if scientific data is unavailable
 - Volume and quality of water for Kulen Mountain and downstream watershed in the Angkor Area

Note: wherever available, both qualitative and quantitative data should be used for the above analyses. In the case when quantitative data is unavailable, qualitative data or description of factors can be used.

2. Socio and economic analysis in the Kulen Mountain

This section analyses 1) socio economic status of villagers residing in and around Kulen mountain, 2) main livelihood activities in the past and present, 3) main drivers behind current patterns of land uses and 3) how their use of natural resources has transformed the landscapes over time.

- Background information of villages in the Kulen Mountain to present a brief history of migration, types of villages in terms of the times they migrated, their legal status, and their ethnic backgrounds. Maps should be included to show the locations of these villages.
- Economic analyses of incomes generated by livelihood activities with attention to their transformative impacts on the watershed **in cooperation with a national ethnographer who will lead this component of the work.**
 - Cashew (annual per ha)
 - Timber per cubic meter
 - Firewood—how much firewood do they extract? —how much per kg do they sell—who are main buyers?
 - Charcoal- how much firewood, do they extract during dry seasons—how much per kg do they sell—who are main buyers
 - Brick production
 - Non-Timber Forest Products
 - Medicinal plants
 - Tourism—restaurants, shops
- Analysis of livelihood activities of villages (more than 10 villages) **in cooperation with a national ethnographer who will lead this component of the work.** This includes making profiles of each village:
 - Brief village background (year of formation, legal status, size of population, size of lands, major land uses, poverty level (if available))
 - Size of land holding by level of wealth
 - Main livelihood activities (e.g. agriculture (slash and burn agriculture), forest based livelihoods, tourism, services etc) drawing on individual and/or focused group interviews.
 - What are major income sources of different segments of villagers?
 - How are different segments of villagers dependent on natural resources?
 - Why do people use resources as they do?
 - What are their perceptions of the state of forests over 10 years?
 - What do they think are major challenges and issues when forests are degraded?

- What do they think need to be improved- ecosystems, infrastructure?
- How do they use lands and natural resources? Is there any change before and now in the use of natural resources? Categorize their patterns of use differentiated by levels of wealth, types of occupation and gender
- How did the shifting cultivation transform over time- in a manner that adds mounting pressure on the Kulen Mountain?
- How these have impacted/had consequences for the resilience of the Phnom Kulen and surrounding watershed? The analysis should link livelihoods to the transformation of the watershed noting that it is people who drive the dominance of one ecosystem service over the other, the implicit trade-offs, and the ultimate resilience/lack of resilience.
- Dynamics of decision making
 - What are decision making mechanisms at the village level? How collective decisions have been made on the use of natural resources?
 - What are the decision-making mechanisms at inter-village level?
 - What are existing decision making mechanisms at the provincial, district, commune and village levels in relation to Natural Resources Management?
 - How do different decision makers (Ministry of Environment (MoE), APSARA, Provincial, District departments, commune and village councils) interact to make any decisions related to the Kulen Mountain at different inter-linked levels? Any coordination mechanisms?

3. Institutional and governance analysis

- Analysis of laws, policies and programmes related to Kulen Mountain
 - Relevant laws, policies, and programmes
 - How effective these regulatory frameworks have been? Patrolling? Fines?
- Analysis of major institutions and their roles in relation to the management of the Kulen Mountain
 - Village, commune, district councils, provincial governments, MoE and Apsara
 - MoE roles/mandates/capacities
 - Their mandates and roles in relation to the management of Kulen Mountain?
 - How much funds do they have for the management? How are the funds used?
 - How many officers assigned to manage the Kulen Mountain? What are their qualifications, capacities, motivations and behaviors in relation to the management?
 - How often do they patrol the Protected Area (PA)? How large area are they responsible for?
 - What are major constraints in carrying out their mandates
 - Number of staff? Salary level? Lack of expertise? Lack of equipment?
 - Social relationships?
 - What are their perceptions of the state of the forests compared to 10 years ago?
 - What are main challenges and issues in law enforcement?
 - Apsara authority roles/mandates/capacities
 - Same questions for MOE to be asked
 - Local based organizations
 - Community Protected Areas (CPAs)
 - How many CPAs are there? Where are they located?
 - What are their mandates and roles?
 - What are their views on CPAs?

- What are major issues and challenges CPAs face?
 - What are major points, which need to be improved for CPA to be effective?
- Archaeological Protected Areas (APAs)
 - What are their mandates and roles?
 - What are their views on APAs?
 - What are major issues and challenges APAs face?
 - What are major points, which need to be improved for APA to be effective?
- Reflections on the effectiveness in the past and current measures taken to arrest deforestation and forest degradation
 - Boundary demarcation
 - CPAs and APAs
 - Law enforcement
 - Reforestation and afforestation
 - Promotion of alternative livelihoods
- Analysis of fund collection and distribution mechanisms inside and around the Kulen Mountain
 - What are main current sources of fund for Kulen Mountain?
 - How much is entrance fee?
 - How many tourists (international and national tourists) visit the site? (to estimate a total volume of income generated by tourism)
 - Who manage and govern the fund?
 - How are they distributed among different actors? For what purposes?

4. Initial policy recommendations for interventions in support for PES.

- Reflections of factors which may transform villagers' behaviours
 - What may change behaviours from resource extraction to sustainable use?
 - What are other options available as alternative livelihood activities?
- Reflections on what ecosystem services would benefit (become more resilient) from putting a price to them and whether it is viable to use tourism and water as a means to ensure that other ecosystem services are maintained (e.g. paying people to get off cashew or putting in place plantations for fuelwood)
- Reflections of possible measures which can be applied for effective conservation of the Kulen Mountain. These measures include law enforcement, demarcation, CPAs and APA, awareness raising and analysis of alternatives. Working with Monsanto for alternatives?
- Possible sources of funding for PES
 - Entry fees?
 - Restaurant at the waterfall?
 - Water companies?
 - Brick factories?
- Possible payment distribution mechanisms? Who should manage the funds? Who should receive payment for what kinds of activities?

5. Make a presentation on key findings and prepare a draft report (not more than 50 pages) to cover the above four components for comments

6. Final report incorporating comments from UNDP and relevant partners

Part II: PES Designing

1. Join and contribute to a series of design sessions for PES as a resource person

4. **Expected Outputs and Deliverables**

N	Deliverables/Outputs	Estimated Duration to Complete	Target Due Dates	Review and Approvals Required
1	Workplan to conduct the assignment	3 days	September 5, 2017	Reviewed by Policy Specialist Approved by UNDP Senior Policy Advisor
2	Draft report on 1. land and resource analysis	25 days	September 30, 2017	
3	Draft report on 2. socio economic analysis	20 days	October 30, 2017	
4	Draft report on 3. institutional and governance analysis	10 days	November 20, 2017	
5	Draft report on 4. initial policy recommendations	10 days	November 30 2017	
6	A presentation on key findings and a draft report for comments	7 days	December 5 2017	
7	A final draft report covering all the four components incorporating comments	5 days	December 15 2017	
8	Contribute to design sessions for PES	10 days	June 30, 2018	
Total # of Days		90 days		

5. **Institutional Arrangement**

Roles of the international consultant

- The consultant shall work with a UNDP policy specialist, and the governing working group on PES throughout the assignments
- The consultant shall report on/submit the above deliverables to the PES working group as well as to UNDP Cambodia for comments.
- The consultant needs to maintain regular communication with UNDP Country Office as and when problems emerge during the consultancy period, especially if they affect the scope of the job.

Roles of the UNDP Country

- The County Offices will review the deliverables for payment release

6. **Duration of the Work**

Person-days for the total assignment is 90 days. The period assignment is expected from August 31st, 2017 to June, 30, 2018.

7. **Duty Station**

The duty stations for this assignment are home country and at least 3 trips to Cambodia with a minimum number of stays in Siem Reap for 40 days and a minimum number of stays in Phnom Penh for 5 days. Travelling costs between Phnom Penh and Siem Reap and within Siem Reap will be covered by the consultant.

Selected individual contract(s) who is expected to travel to the Country Office (CO) to undertake the assignment in the country (Cambodia) is required to undertake the Basic Security in the Field (BSIF) training

(<https://dss.un.org/dssweb/WelcometoUNDSS/tabid/105/Default.aspx?returnurl=%2fdssweb%2f>) prior to travelling. CD ROMs must be made available for use in environments where access to technology

poses a challenge. i

8. Minimum Qualifications of the Individual Contractor

Education:	A master's degree in Anthropology, Archaeology or other relevant discipline (a PhD degree is preferred)
Experience:	<ul style="list-style-type: none"> At least 10 years of experiences working in the field of Protected Areas, national parks, protection of archaeological sites and working with local communities and governments. Prior working experience in Cambodia and knowledge of the Kulen Mountain and its archaeological values is an asset Prior experience in conducting socio economic research, writing reports and in designing and implementing development and livelihood programmes
Language Requirement:	Fluency in written and spoken English. Knowledge of Khmer is an asset

9. Criteria for Evaluation of Level of Technical Compliance of Individual Contractor

As part of transparency, ToR must bear the general criteria, which will be used in

Technical Evaluation Criteria	Obtainable Score
A master's degree in Anthropology, Archaeology or other relevant discipline (a PhD degree is preferred)	20
At least 10 years of experiences working in the field of Protected Areas, protection of archaeological sites and working with local communities and governments. Prior working experience in Cambodia and knowledge of the Kulen Mountain and its archaeological values is an asset	30
Prior experience in conducting socio economic research, writing reports and in designing and implementing development and livelihood programmes.	30
Fluency in written and spoken English. Knowledge of Khmer is an asset	20
Total Obtainable Score:	100

10. Payment Milestones

The consultant will be paid on a lump sum basis under the following instalments.

N	Outputs/Deliveries	Payment Schedule	Payment Amount
1	Upon satisfactory completion of deliverable #1	September 5,2017	10%
2	Upon satisfactory completion of deliverable #2, #3	October 30, 2017	30%
3	Upon satisfactory completion of deliverable #4, #5	November 30,2017	30%
4	Upon satisfactory completion of deliverable #6, #7	December 15, 2017	20%
5	Upon satisfactory completion of deliverable #8	June 30, 2018	10%