

Project Completion Check List

Country Office: UNDP Cambodia **Project/Output No.** 00085640/00093203

I confirm that all of the following matters have been considered and resolved:

√	No outstanding NEX advances – in either local currency or USD
√	No outstanding PDRs
√	No open Purchase Orders
√	No Receipt Accruals
√	No outstanding commitments
√	No pending prepayments and other non PO advances
√	All pre-financing activities have been recovered and/or reimbursed
√	No pending GMS or Direct Project Charging (formerly ISS). (If Off-the-top GMS was used, extra-budgetary income taken must be reconciled to actual expenses/delivery. A pro-rata return of GMS based on the balance of unspent funds must be done.)
√	No pending GLJEs
√	No unapplied deposits or other unrecorded revenue
√	No outstanding Accounts Receivable to be received from donors per signed agreements
√	No AR direct journals in budget error or incomplete status
√	All assets are transferred or otherwise disposed of. Asset transfer letters/ documents are in place
√	Ensure all transactions for sale/transfer/donation/disposal etc. of assets have been processed and GMS charged
√	All items held as inventory should be distributed or transferred to recipient or returned to donor as specified in the donor agreement
√	All project petty cash is cleared
√	Project bank account is fully reconciled and closed
√	All accrued employee benefits are fully accounted
√	No other pending liabilities
√	The CDR for the previous quarter shows zero future expenses (commitments).
√	Final LPAC/ steering committee minutes are available
√	All audit observations are closed with supporting documentation.
√	The final CDR is signed by UNDP and the Implementing Partner. Final report submitted by responsible parties.
√	If a cost sharing project, the unexpended balance has been agreed to the general ledger.

eChecklist Instructions:

In order to be able to close the project financially all items in the list need to be checked as (YES). If any of the items is not applicable for the project then it can be checked as (YES). This list provides details based on standard queries based on the output ID so it might not reflect some of the exceptions. Therefore; it should be used as a guide for the closure but manual verification as per the POPP is required by the CO to ensure all the exceptions have been considered and resolved.

Financial Closure Checklist				
TASK	YES	No	NOTES	
				Atlas Transaction Check
Ensure that all financial transactions are in Atlas General Ledger (Based on final report from the Implementing Partner)			Account	Atlas Balance Transaction Currency Base Currency (USD)
No outstanding NEX advances-in either local currency or USD (Account 16005)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Outstanding Advances</u>	0.00 \$ 0.00
No other outstanding advances-in either local currency or USD (Account 14001, 14056, 14057, 14501, 16006, 16010, 16015, 17008, 17009)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Outstanding Advances Other</u>	0.00 \$ 0.00
No outstanding Project Delivery Reports (PDRs);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PDR: http://unex.undp.org	
No open Purchase Orders (POs);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Open Purchase Orders</u>	0.00 \$ 0.00
No Receipt Accruals;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Receipt Accruals</u>	0.00 \$ 0.00
No Outstanding Commitments;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Please ensure commitments outside Atlas are resolved (Non-PO Commitments) - Supporting documents if any should be uploaded to Atlas (Attachments Tab)	
No outstanding prepaid vouchers (Account 16065)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Prepaid Vouchers</u>	0.00 \$ 0.00
No pending vouchers;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No Pending Vouchers</u> - Please run the query link to verify and check any pending vouchers.	
All pre-financing activities have been recovered and/or reimbursed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)	
No pending GMS or Direct Project Charging (Formerly ISS). (If Off-the-top GMS was used, extra-budgetary income taken must be reconciled to actual expense/delivery. A pro-rata return of GMS based on the balance of unspent funds must be done);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Charged GMS Rate %</u>	% 8.00 % 8.00
No pending GLJEs;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>GLJEs Not Posted</u>	0.00 \$ 0.00
No unapplied deposits or other unrecorded revenue;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Unapplied Deposits by Office</u>	0.00 \$ 0.00
No outstanding Accounts Receivable to be received from donors per signed agreements;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Contract Pending Events</u>	0.00 \$ 0.00
No outstanding Contribution Receivable to be collected from donor (GL Account 14015 Balance including FX Revaluation)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Contribution Amount Not Collected</u>	0.00 \$ 0.00
No AR direct journals in budget error or incomplete status;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No Pending AR direct journals</u> - Please run the query link to verify and check any pending AR direct journals.	
All assets are transferred or otherwise disposed of; Asset Transfer letters/documents are in place. (GL 18xxx Accounts) (Click Link for ISR Report)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Assets</u>	\$ 0.00 \$ 0.00
All un-used inventory items held at the end of the project has been disposed off or transferred to other projects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)	
Ensure all transactions for sale/transfer/donation/disposal etc. of assets have been processed and GMS charged.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)	
All items held as inventory should be distributed or transferred to recipient or returned to donor as specified in the donor agreement.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)	
All Project Petty Cash (11015 (old), 16105(new)) and Project Cash Advance Accounts (Acc. 16106, 16107, 16108 and 16007) are cleared;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Petty Cash & Cash Advance</u>	0.00 \$ 0.00
Project Bank Account is fully reconciled and closed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Project staff should coordinate with Implementing partner to close Project Bank account.	
All Staff Receivables in USD Only (Acc. 14005, 14020, 14022, 14023, 14025, 14030, 14035, 14040, 14042, 14045, 14046, 14050, 14055, 14085) are cleared;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Staff Receivables</u>	0.00 \$ 0.00
All accrued employee benefits are fully accounted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Employee Benefits</u>	0.00 \$ 0.00
No other pending liabilities in USD Only; (GL 2xxxx Accounts - Excluding 21005)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Pending Liabilities</u>	0.00 \$ 0.00

Copy of CDR should be uploaded to Atlas (Attachments Tab)

The CDR for the previous quarter shows Zero future expenses (commitments).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Final LPAC / Steering committee minutes are available.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Minutes should be uploaded to Atlas (Attachments Tab)
All audit observations are closed with supporting documentation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)
The final CDR is signed by UNDP and the Implementing Partner. Final report submitted by responsible parties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents should be uploaded to Atlas (Attachments Tab)
General Ledger Cash Balance			
If cost sharing project, the unexpended balance has been agreed to the general ledger. (The Balances excludes Open Purchase Orders reflected in the Output Financials) AND (Excludes Outstanding Contribution Receivable to be collected from donor) if any.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Fund	Donor	Amount USD
	30000	00555	\$ 3,124.40
Consultations with Donors on the disposition of unexpended cost-sharing balances, where required by contribution agreement, have taken place and are documented in writing.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	UNDP Issue refunds to donor as the very last step before designating a project as financially complete in ATLAS .If the donor requests a refund at any earlier point then you need to the approval of the Chief, Account Division or Treasurer to issuing the refund. Please refer to <u>Refunds to Donors</u> in the POPP.
All refunds to donors have been transferred to Account 21030 (Pending Refund to Donors) and the project Balance is Zero. (Only in Base Currency)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pending Refund to Donor \$ 0.00
Notified Treasury Contributions Unit if the donor agreement requires interest to be refunded to the donor if specified in the agreement.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)
Notified the GSSC to close any associated contract in the contracts module.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)
All donor reports, as established in the Cost Sharing agreement, were submitted and acknowledged receipt by the donor representative.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Supporting documents if any should be uploaded to Atlas (Attachments Tab)
Ensure project accounts are closed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Closure of any project-based financial accounts or funds. Once confirmed, project status in Atlas will be set to "Financially Closed". No further financial transactions can be made.
For more information on project closure procedures and policies, please refer to <u>Closing a Project</u> and <u>Financial Closure of Development Projects and Financial Closure of Trust Funds</u> in the POPP.			



Management Comments (if any):

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Author	DateTime Stamp

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Welcome Hamkallyan HUY to Atlas Community!

Project Closure Checklist Financial Closure Checklist Status History and Attachments

Output Details		Output Dates		Output Status
Business Unit	KHM10	Start Date	01/01/2019	Operationally Closed
Project Number	00085640	End Date	30/09/2021	
Output Number	00093203	Output Manager	Effective Date	
Output Name	Building an Enabling Environme		22/2/2022	

Output Financials (Cash Funds)		Output Financials (Allocation Funds)	
Total Contribution Recognized	\$ 2,904,840.06	Approved Budget	\$ 316,240.00
Transfers to/from - Funds/Donor	\$ 0.00	Advances Balance	\$ 0.00
Interest Earned	\$ 0.00	Total Expense	\$ 310,432.60
Advances Balance	\$ 0.00	Undepreciated Assets	\$ 0.00
Total Expense	\$ 2,901,715.66	Open Purchase Orders	\$ 0.00
Undepreciated Assets	\$ 0.00	Balance	\$ 5,807.40
Open Purchase Orders	\$ 0.00		
Fund Balance	\$ 3,124.40		

eChecklist Instructions:

In order to be able to close the project operationally all items in the below list need to be checked as (YES). If any of the items is not applicable for the project then it can be checked as (YES). A project is operationally completed when the last UNDP-financed inputs have been provided and related activities have been completed.

Operational Completion:

A project is operationally complete when the last UNDP-financed inputs have been provided and the related activities have been completed. Through the project board, the implementing partner promptly notifies the UNDP country office when this has been done. Should the implementing partner not do so, the UNDP programme manager must determine when the project is operationally complete.

When a project is operationally complete, the parties must agree on the disposal of any equipment that is still the property of UNDP.

<https://popp.undp.org/SitePages/POPPSubject.aspx?SBID=248&Menu=BusinessUnit>

Operational Closure Checklist				
No.	TASK	YES	NO	NOTES
1	Prepare Final Project Review Report and as Annex, a lessons-learned report.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A standard format should be used. Review the following links: Final Project Review Report (POPP) and lessons learned as per the following guidelines . Using the final Project Review Report, the Lessons Learned Report and other documentation as appropriate, the project board should assess in this meeting the performance and success of the project, and its contribution to related outcomes. Topics during the review include: <ul style="list-style-type: none"> Achievements of last year targets; Overall project performance and sustainability of results; Achievement on capacity development; Outstanding activities; All Open POs have been fully received; Lessons learned; Use of remaining budget, if any; Effective date of project closure; Transitioning of responsibilities to national counterparts; Hand-over of assets.
2	Conduct Final Project Review by Project Board. And update the lessons learned report to include a brief record of decisions and conclusions related to follow-up actions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	Commission project evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If required by partnership arrangements or if so decided by UNDP, commission project evaluation, prepare a management response to evaluation and discuss and share findings and recommendations for learning. Review the following links: Evaluation Resource Centre TOR for Evaluation Evaluation Report Format
4	Initiate project Audit (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NEX projects have to be audited at least once in the life of the project, and each year that it is considered appropriate by the CO (depending on level of delivery, difficulties found during the year, etc.). For more information on project audit, please refer to Office of Audit and Investigations website.
5	Notify the Project Board / Programme Manager on the operational completion of the project.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The project is operationally complete when the last UNDP-financed inputs have been provided and related activities completed. The Project Manager should notify the Project Board, who in turn should notify the Programme manager about the operational completion of the project. Otherwise, programme manager decides when the project is operationally completed.
6	Operationally close the Output.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Based on the Project Board decision to close the project, project status in Atlas will be set to "Operationally Closed". No further financial commitment can be made.

Management Comments (if any):

Find First 1 of 1 Last

Author sovanna.chi **DateTime Stamp** 08/12/21 6:37PM

All obligations completed. Project final report shared with donor for comment before finalization.

Approver nimnuon.iv-ek

Datetime 10/02/22 9:27:03PM

[Project Closure Checklist](#) | [Financial Closure Checklist](#) | [Status History and Attachments](#)



Combined Delivery Report

Project: **00085640 - Building an Enabling Environme**

Country: **Cambodia**

Period: **Quarter 4, 2021**

Status: **Approved**

Report by Output and Fund

Account	Description	Government	UNDP	UN Agencies	Total
Output: 00093203 - Building an Enabling Environme		422,862.94	602,715.06	0.00	1,025,578.00
Fund: 04000 - TRAC (Lines 1.1.1 and 1.1.2)		0.00	30,433.82	0.00	30,433.82
64397	Services to projects -CO staff	0.00	9,402.25	0.00	9,402.25
72401	Prefab structure/other buildin	0.00	15,700.00	0.00	15,700.00
72445	Common Services-Communications	0.00	213.00	0.00	213.00
73125	Common Services-Premises	0.00	2,416.15	0.00	2,416.15
74596	Services to projects -GOE	0.00	2,702.42	0.00	2,702.42
Fund: 30000 - Programme Cost Sharing		422,862.94	572,281.24	0.00	995,144.18
61105	Salaries - NP Staff	0.00	2,004.01	0.00	2,004.01
61305	Salaries - IP Staff	0.00	30,958.44	0.00	30,958.44
61310	Post Adjustment - IP Staff	0.00	9,055.73	0.00	9,055.73
62305	Dependency Allowances-IP Staff	0.00	3,445.66	0.00	3,445.66
62310	Contrib to Jt Staff Pens Fd-IP	0.00	9,006.63	0.00	9,006.63
62315	Contrib. to medical, social in	0.00	775.63	0.00	775.63
62320	Mobility, Hardship, Non-remova	0.00	3,540.28	0.00	3,540.28
62340	Annual Leave Expense - IP	0.00	3,194.90	0.00	3,194.90
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	3,554.61	0.00	3,554.61
63335	Home Leave Trvl & Allow-IP Stf	0.00	890.31	0.00	890.31
63350	Reimb of Income Tax-IP Staff	0.00	951.67	0.00	951.67
63530	Contribution to EOS Benefits	0.00	1,211.32	0.00	1,211.32
63535	Contribution to Security	0.00	1,384.47	0.00	1,384.47
63540	Contribution to Training	0.00	121.11	0.00	121.11
63545	Contribution to ICT	0.00	519.24	0.00	519.24
63550	Contributions to MAIP	0.00	17.26	0.00	17.26
63555	Contribution to UN JFA	0.00	969.10	0.00	969.10
63560	Contributions to Appendix D	0.00	86.44	0.00	86.44
64310	Separations - IP Staff	0.00	432.72	0.00	432.72
64397	Services to projects -CO staff	0.00	8,588.79	0.00	8,588.79
65115	Contributions to ASHI Reserve	0.00	3,443.81	0.00	3,443.81
65135	Payroll Mgt Cost Recovery ATLA	0.00	228.92	0.00	228.92
71205	Intl Consultants-Sht Term-Tech	0.00	41,250.00	0.00	41,250.00
71211	Intl Consult Security Charge	0.00	1,122.00	0.00	1,122.00
71305	Local Consult.-Sht Term-Tech	70,631.00	28,860.00	0.00	99,491.00
71360	Local Consult-Security	0.00	919.20	0.00	919.20
71405	Service Contracts-Individuals	28,849.46	43,999.77	0.00	72,849.23
71410	MAIP Premium SC	0.00	19.32	0.00	19.32
71415	Contribution to Security SC	0.00	1,544.09	0.00	1,544.09
71615	Daily Subsistence Allow-Intl	0.00	8,203.61	0.00	8,203.61
71620	Daily Subsistence Allow-Local	19,202.95	0.00	0.00	19,202.95
71635	Travel - Other	0.00	1,999.29	0.00	1,999.29
72105	Svc Co-Construction & Engineer	3,955.00	49,010.40	0.00	52,965.40
72110	Svc Co-Agricultural Management	50,000.00	0.00	0.00	50,000.00
72115	Svc Co-Natural Resources & Env	0.00	2,952.00	0.00	2,952.00
72210	Machinery and Equipment	13,007.00	0.00	0.00	13,007.00
72305	Agri & Forestry Products	19,949.50	0.00	0.00	19,949.50
72311	Fuel, petroleum and other oils	586.51	0.00	0.00	586.51
72399	Other Materials and Goods	61,371.37	28,571.40	0.00	89,942.77
72401	Prefab structure/other buildin	0.00	89,634.02	0.00	89,634.02
72425	Mobile Telephone Charges	1,219.80	116.46	0.00	1,336.26
72440	Connectivity Charges	211.20	609.20	0.00	820.40

72445	Common Services-Communications	8,000.00	355.00	0.00	8,355.00
72505	Stationery & other Office Supp	6,047.86	0.00	0.00	6,047.86
72510	Publications	256.30	0.00	0.00	256.30
72605	Grants to Instit & other Benef	0.00	83,623.48	0.00	83,623.48
72815	Inform Technology Supplies	20,633.70	0.00	0.00	20,633.70
73125	Common Services-Premises	0.00	2,804.48	0.00	2,804.48
73405	Rental & Maint-Other Office Eq	0.00	260.00	0.00	260.00
74110	Audit Fees	0.00	4,294.46	0.00	4,294.46
74210	Printing and Publications	20,202.80	3,652.00	0.00	23,854.80
74215	Promotional Materials and Dist	13,337.00	0.00	0.00	13,337.00
74220	Translation Costs	5,191.00	4,861.67	0.00	10,052.67
74225	Other Media Costs	0.00	992.50	0.00	992.50
74505	Insurance	497.13	0.00	0.00	497.13
74510	Bank Charges	4,175.83	0.00	0.00	4,175.83
74525	Sundry	556.00	0.00	0.00	556.00
74596	Services to projects -GOE	0.00	2,960.58	0.00	2,960.58
75105	Facilities & Admin - Implement	0.00	73,714.36	0.00	73,714.36
75705	Learning costs	65,538.41	11,570.90	0.00	77,109.31
75706	Learning - ticket costs	2,167.12	0.00	0.00	2,167.12
75707	Learning - subsistence allowan	7,276.00	0.00	0.00	7,276.00

Project Total:		422,862.94	602,715.06	0.00	1,025,578.00
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Report by Activity and Fund

Account	Description	Government	UNDP	UN Agencies	Total
Output: 00093203 - Building an Enabling Environme		422,862.94	602,715.06	0.00	1,025,578.00
Activity: ACTIVITY1.1 - 1-1 Expansion and strengthening		63,446.46	45,317.74	0.00	108,764.20
Fund: 30000 - Programme Cost Sharing		63,446.46	45,317.74	0.00	108,764.20
61305	Salaries - IP Staff	0.00	2,563.29	0.00	2,563.29
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71305	Local Consult.-Sht Term-Tech	3,750.00	0.00	0.00	3,750.00
71405	Service Contracts-Individuals	2,725.00	2,089.39	0.00	4,814.39
71410	MAIP Premium SC	0.00	0.89	0.00	0.89
71415	Contribution to Security SC	0.00	71.93	0.00	71.93
71620	Daily Subsistence Allow-Local	7,243.00	0.00	0.00	7,243.00
72305	Agri & Forestry Products	17,949.50	0.00	0.00	17,949.50
72505	Stationery & other Office Supp	358.60	0.00	0.00	358.60
72510	Publications	101.20	0.00	0.00	101.20
72605	Grants to Instit & other Benef	0.00	25,410.00	0.00	25,410.00
72815	Inform Technology Supplies	1,023.00	0.00	0.00	1,023.00
74220	Translation Costs	0.00	1,332.80	0.00	1,332.80
74510	Bank Charges	10.00	0.00	0.00	10.00
75105	Facilities & Admin - Implement	0.00	8,056.60	0.00	8,056.60
75705	Learning costs	30,286.16	3,106.00	0.00	33,392.16
Activity: ACTIVITY1.2 - 1-2 Operational of payment for		62,084.35	12,972.07	0.00	75,056.42

Fund: 30000 - Programme Cost Sharing		62,084.35	12,972.07	0.00	75,056.42
61305	Salaries - IP Staff	0.00	2,563.29	0.00	2,563.29
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71305	Local Consult.-Sht Term-Tech	14,000.00	0.00	0.00	14,000.00
71405	Service Contracts-Individuals	3,000.00	2,089.39	0.00	5,089.39
71410	MAIP Premium SC	0.00	0.89	0.00	0.89
71415	Contribution to Security SC	0.00	71.93	0.00	71.93
71620	Daily Subsistence Allow-Local	859.20	0.00	0.00	859.20
72105	Svc Co-Construction & Engineer	3,955.00	0.00	0.00	3,955.00
72399	Other Materials and Goods	19,241.37	0.00	0.00	19,241.37
72505	Stationery & other Office Supp	760.02	0.00	0.00	760.02
72510	Publications	46.20	0.00	0.00	46.20
74210	Printing and Publications	3,132.80	0.00	0.00	3,132.80
74220	Translation Costs	2,211.00	0.00	0.00	2,211.00
74510	Bank Charges	10.00	0.00	0.00	10.00
75105	Facilities & Admin - Implement	0.00	5,559.73	0.00	5,559.73
75705	Learning costs	14,868.76	0.00	0.00	14,868.76
Activity: ACTIVITY1.5 - 1-5 Dev'l of strategic communi		0.00	2,335.18	0.00	2,335.18
Fund: 30000 - Programme Cost Sharing		0.00	2,335.18	0.00	2,335.18
71405	Service Contracts-Individuals	0.00	2,089.37	0.00	2,089.37
71410	MAIP Premium SC	0.00	0.89	0.00	0.89
71415	Contribution to Security SC	0.00	71.93	0.00	71.93
75105	Facilities & Admin - Implement	0.00	172.99	0.00	172.99
Activity: ACTIVITY1.6 - 1-6 Dev'l of scaling up strate		0.00	2,335.20	0.00	2,335.20
Fund: 30000 - Programme Cost Sharing		0.00	2,335.20	0.00	2,335.20
71405	Service Contracts-Individuals	0.00	2,089.39	0.00	2,089.39
71410	MAIP Premium SC	0.00	0.89	0.00	0.89
71415	Contribution to Security SC	0.00	71.93	0.00	71.93
75105	Facilities & Admin - Implement	0.00	172.99	0.00	172.99
Activity: ACTIVITY1.7 - 1-7 Monitoring n Evaluation		0.00	2,386.22	0.00	2,386.22
Fund: 30000 - Programme Cost Sharing		0.00	2,386.22	0.00	2,386.22
74110	Audit Fees	0.00	2,209.46	0.00	2,209.46
75105	Facilities & Admin - Implement	0.00	176.76	0.00	176.76
Activity: ACTIVITY1.8 - Tree Planting&ForestProtection		11,302.35	77,966.11	0.00	89,268.46
Fund: 30000 - Programme Cost Sharing		11,302.35	77,966.11	0.00	89,268.46
71405	Service Contracts-Individuals	0.00	20,353.25	0.00	20,353.25
71410	MAIP Premium SC	0.00	9.11	0.00	9.11
71415	Contribution to Security SC	0.00	728.93	0.00	728.93
71615	Daily Subsistence Allow-Intl	0.00	1,982.41	0.00	1,982.41
71620	Daily Subsistence Allow-Local	6,553.75	0.00	0.00	6,553.75
71635	Travel - Other	0.00	539.08	0.00	539.08
72305	Agri & Forestry Products	2,000.00	0.00	0.00	2,000.00
72605	Grants to Instit & other Benef	0.00	47,740.85	0.00	47,740.85
75105	Facilities & Admin - Implement	0.00	6,612.48	0.00	6,612.48
75705	Learning costs	2,748.60	0.00	0.00	2,748.60
Activity: ACTIVITY2.1 - 2-1 Circular eco pilot Municip		181,727.94	24,878.65	0.00	206,606.59
Fund: 30000 - Programme Cost Sharing		181,727.94	24,878.65	0.00	206,606.59

61305	Salaries - IP Staff	0.00	2,563.29	0.00	2,563.29
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71305	Local Consult.-Sht Term-Tech	3,000.00	0.00	0.00	3,000.00
71405	Service Contracts-Individuals	8,720.46	4,178.64	0.00	12,899.10
71410	MAIP Premium SC	0.00	1.83	0.00	1.83
71415	Contribution to Security SC	0.00	143.85	0.00	143.85
71620	Daily Subsistence Allow-Local	3,002.00	0.00	0.00	3,002.00
72110	Svc Co-Agricultural Management	50,000.00	0.00	0.00	50,000.00
72399	Other Materials and Goods	42,130.00	0.00	0.00	42,130.00
72505	Stationery & other Office Supp	3,948.34	0.00	0.00	3,948.34
72815	Inform Technology Supplies	6,627.90	0.00	0.00	6,627.90
74210	Printing and Publications	17,070.00	0.00	0.00	17,070.00
74215	Promotional Materials and Dist	13,337.00	0.00	0.00	13,337.00
74220	Translation Costs	2,980.00	0.00	0.00	2,980.00
74510	Bank Charges	3,882.23	0.00	0.00	3,882.23
75105	Facilities & Admin - Implement	0.00	15,304.20	0.00	15,304.20
75705	Learning costs	17,586.89	0.00	0.00	17,586.89
75706	Learning - ticket costs	2,167.12	0.00	0.00	2,167.12
75707	Learning - subsistence allowan	7,276.00	0.00	0.00	7,276.00
Activity: ACTIVITY2.2 - 2-2 Circular eco pilot Industr		0.00	37,493.93	0.00	37,493.93
Fund: 30000 - Programme Cost Sharing		0.00	37,493.93	0.00	37,493.93
61305	Salaries - IP Staff	0.00	2,563.29	0.00	2,563.29
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71305	Local Consult.-Sht Term-Tech	0.00	6,240.00	0.00	6,240.00
71360	Local Consult-Security	0.00	249.60	0.00	249.60
71405	Service Contracts-Individuals	0.00	4,178.64	0.00	4,178.64
71410	MAIP Premium SC	0.00	1.83	0.00	1.83
71415	Contribution to Security SC	0.00	143.85	0.00	143.85
72105	Svc Co-Construction & Engineer	0.00	7,393.00	0.00	7,393.00
72115	Svc Co-Natural Resources & Env	0.00	2,952.00	0.00	2,952.00
75105	Facilities & Admin - Implement	0.00	2,777.33	0.00	2,777.33
75705	Learning costs	0.00	8,307.55	0.00	8,307.55
Activity: ACTIVITY2.3 - 2-3 Dev'l of strategic communi		0.00	11,310.44	0.00	11,310.44

Fund: 30000 - Programme Cost Sharing		0.00	11,310.44	0.00	11,310.44
72605	Grants to Instit & other Benef	0.00	10,472.63	0.00	10,472.63
75105	Facilities & Admin - Implement	0.00	837.81	0.00	837.81
Activity: ACTIVITY2.4 - 2-4 Dev'l of enabling policies		9,581.00	9,918.52	0.00	19,499.52
Fund: 30000 - Programme Cost Sharing		9,581.00	9,918.52	0.00	19,499.52
61305	Salaries - IP Staff	0.00	2,563.29	0.00	2,563.29
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71205	Intl Consultants-Sht Term-Tech	0.00	3,100.00	0.00	3,100.00
71211	Intl Consult Security Charge	0.00	124.00	0.00	124.00
71305	Local Consult.-Sht Term-Tech	9,581.00	0.00	0.00	9,581.00
75105	Facilities & Admin - Implement	0.00	1,444.39	0.00	1,444.39
Activity: ACTIVITY2.5 - 2-5 Dev'l of scaling up strate		0.00	26,449.30	0.00	26,449.30
Fund: 30000 - Programme Cost Sharing		0.00	26,449.30	0.00	26,449.30
61305	Salaries - IP Staff	0.00	2,563.27	0.00	2,563.27
61310	Post Adjustment - IP Staff	0.00	590.20	0.00	590.20
62305	Dependency Allowances-IP Staff	0.00	196.16	0.00	196.16
62310	Contrib to Jt Staff Pens Fd-IP	0.00	582.53	0.00	582.53
62315	Contrib. to medical, social in	0.00	61.60	0.00	61.60
62320	Mobility, Hardship, Non-remova	0.00	148.15	0.00	148.15
62340	Annual Leave Expense - IP	0.00	194.84	0.00	194.84
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	250.00	0.00	250.00
63335	Home Leave Trvl & Allow-IP Stf	0.00	52.50	0.00	52.50
63350	Reimb of Income Tax-IP Staff	0.00	61.94	0.00	61.94
63530	Contribution to EOS Benefits	0.00	78.84	0.00	78.84
63535	Contribution to Security	0.00	90.12	0.00	90.12
63540	Contribution to Training	0.00	7.88	0.00	7.88
63545	Contribution to ICT	0.00	33.80	0.00	33.80
63550	Contributions to MAIP	0.00	1.13	0.00	1.13
63555	Contribution to UN JFA	0.00	63.07	0.00	63.07
63560	Contributions to Appendix D	0.00	5.62	0.00	5.62
64310	Separations - IP Staff	0.00	28.18	0.00	28.18
65115	Contributions to ASHI Reserve	0.00	224.18	0.00	224.18
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.10	0.00	16.10
71205	Intl Consultants-Sht Term-Tech	0.00	18,500.00	0.00	18,500.00
71211	Intl Consult Security Charge	0.00	740.00	0.00	740.00
75105	Facilities & Admin - Implement	0.00	1,959.19	0.00	1,959.19
Activity: ACTIVITY2.6 - 2-6 Monitoring n Evaluation		0.00	3,726.65	0.00	3,726.65
Fund: 30000 - Programme Cost Sharing		0.00	3,726.65	0.00	3,726.65
71615	Daily Subsistence Allow-Intl	0.00	2,870.40	0.00	2,870.40
71635	Travel - Other	0.00	580.20	0.00	580.20
75105	Facilities & Admin - Implement	0.00	276.05	0.00	276.05
Activity: ACTIVITY3.1 - 3-1 Solar energy for electrici		14,552.00	180,659.49	0.00	195,211.49
Fund: 04000 - TRAC (Lines 1.1.1 and 1.1.2)		0.00	15,700.00	0.00	15,700.00
72401	Prefab structure/other buildin	0.00	15,700.00	0.00	15,700.00
Fund: 30000 - Programme Cost Sharing		14,552.00	164,959.49	0.00	179,511.49
61305	Salaries - IP Staff	0.00	1,947.32	0.00	1,947.32
61310	Post Adjustment - IP Staff	0.00	689.32	0.00	689.32

62305	Dependency Allowances-IP Staff	0.00	283.58	0.00	283.58
62310	Contrib to Jt Staff Pens Fd-IP	0.00	688.92	0.00	688.92
62315	Contrib. to medical, social in	0.00	50.75	0.00	50.75
62320	Mobility, Hardship, Non-remova	0.00	331.46	0.00	331.46
62340	Annual Leave Expense - IP	0.00	253.24	0.00	253.24
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	256.83	0.00	256.83
63335	Home Leave Trvl & Allow-IP Stf	0.00	71.91	0.00	71.91
63350	Reimb of Income Tax-IP Staff	0.00	72.50	0.00	72.50
63530	Contribution to EOS Benefits	0.00	92.27	0.00	92.27
63535	Contribution to Security	0.00	105.48	0.00	105.48
63540	Contribution to Training	0.00	9.24	0.00	9.24
63545	Contribution to ICT	0.00	39.57	0.00	39.57
63550	Contributions to MAIP	0.00	1.31	0.00	1.31
63555	Contribution to UN JFA	0.00	73.82	0.00	73.82
63560	Contributions to Appendix D	0.00	6.59	0.00	6.59
64310	Separations - IP Staff	0.00	32.94	0.00	32.94
65115	Contributions to ASHI Reserve	0.00	262.33	0.00	262.33
65135	Payroll Mgt Cost Recovery ATLA	0.00	16.54	0.00	16.54
71205	Intl Consultants-Sht Term-Tech	0.00	13,200.00	0.00	13,200.00
71620	Daily Subsistence Allow-Local	1,545.00	0.00	0.00	1,545.00
72105	Svc Co-Construction & Engineer	0.00	41,617.40	0.00	41,617.40
72210	Machinery and Equipment	13,007.00	0.00	0.00	13,007.00
72399	Other Materials and Goods	0.00	1,925.00	0.00	1,925.00
72401	Prefab structure/other buildin	0.00	89,634.02	0.00	89,634.02
75105	Facilities & Admin - Implement	0.00	13,297.15	0.00	13,297.15
Activity: ACTIVITY3.2 - 3-2 Building technical capacit		0.00	11,417.62	0.00	11,417.62
Fund: 30000 - Programme Cost Sharing		0.00	11,417.62	0.00	11,417.62
61305	Salaries - IP Staff	0.00	3,894.68	0.00	3,894.68
61310	Post Adjustment - IP Staff	0.00	1,378.63	0.00	1,378.63
62305	Dependency Allowances-IP Staff	0.00	567.18	0.00	567.18
62310	Contrib to Jt Staff Pens Fd-IP	0.00	1,377.87	0.00	1,377.87
62315	Contrib. to medical, social in	0.00	101.51	0.00	101.51
62320	Mobility, Hardship, Non-remova	0.00	662.82	0.00	662.82
62340	Annual Leave Expense - IP	0.00	506.46	0.00	506.46
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	513.65	0.00	513.65
63335	Home Leave Trvl & Allow-IP Stf	0.00	143.83	0.00	143.83
63350	Reimb of Income Tax-IP Staff	0.00	145.01	0.00	145.01
63530	Contribution to EOS Benefits	0.00	184.58	0.00	184.58
63535	Contribution to Security	0.00	210.93	0.00	210.93
63540	Contribution to Training	0.00	18.45	0.00	18.45
63545	Contribution to ICT	0.00	79.10	0.00	79.10
63550	Contributions to MAIP	0.00	2.62	0.00	2.62
63555	Contribution to UN JFA	0.00	147.68	0.00	147.68
63560	Contributions to Appendix D	0.00	13.18	0.00	13.18
64310	Separations - IP Staff	0.00	65.92	0.00	65.92
65115	Contributions to ASHI Reserve	0.00	524.70	0.00	524.70
65135	Payroll Mgt Cost Recovery ATLA	0.00	33.08	0.00	33.08
75105	Facilities & Admin - Implement	0.00	845.74	0.00	845.74
Activity: ACTIVITY3.3 - 3-3 Strategic communication		16,750.52	7,048.85	0.00	23,799.37
Fund: 30000 - Programme Cost Sharing		16,750.52	7,048.85	0.00	23,799.37
61305	Salaries - IP Staff	0.00	1,947.32	0.00	1,947.32
61310	Post Adjustment - IP Staff	0.00	689.32	0.00	689.32
62305	Dependency Allowances-IP Staff	0.00	283.58	0.00	283.58
62310	Contrib to Jt Staff Pens Fd-IP	0.00	688.92	0.00	688.92
62315	Contrib. to medical, social in	0.00	50.75	0.00	50.75
62320	Mobility, Hardship, Non-remova	0.00	331.46	0.00	331.46
62340	Annual Leave Expense - IP	0.00	253.24	0.00	253.24
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	256.83	0.00	256.83
63335	Home Leave Trvl & Allow-IP Stf	0.00	71.91	0.00	71.91
63350	Reimb of Income Tax-IP Staff	0.00	72.50	0.00	72.50
63530	Contribution to EOS Benefits	0.00	92.27	0.00	92.27
63535	Contribution to Security	0.00	105.48	0.00	105.48
63540	Contribution to Training	0.00	9.24	0.00	9.24
63545	Contribution to ICT	0.00	39.57	0.00	39.57
63550	Contributions to MAIP	0.00	1.31	0.00	1.31
63555	Contribution to UN JFA	0.00	73.82	0.00	73.82
63560	Contributions to Appendix D	0.00	6.59	0.00	6.59
64310	Separations - IP Staff	0.00	32.94	0.00	32.94
65115	Contributions to ASHI Reserve	0.00	262.33	0.00	262.33

65135	Payroll Mgt Cost Recovery ATLA	0.00	16.54	0.00	16.54
71305	Local Consult.-Sht Term-Tech	1,200.00	0.00	0.00	1,200.00
71405	Service Contracts-Individuals	1,670.50	0.00	0.00	1,670.50
72425	Mobile Telephone Charges	200.00	0.00	0.00	200.00
72440	Connectivity Charges	211.20	0.00	0.00	211.20
72445	Common Services-Communications	8,000.00	0.00	0.00	8,000.00
72815	Inform Technology Supplies	4,818.00	0.00	0.00	4,818.00
74510	Bank Charges	46.82	0.00	0.00	46.82
74525	Sundry	556.00	0.00	0.00	556.00
75105	Facilities & Admin - Implement	0.00	1,762.93	0.00	1,762.93
75705	Learning costs	48.00	0.00	0.00	48.00
Activity: ACTIVITY3.4 - 3-4 Dev'l of enabling policies		18,300.00	41,659.73	0.00	59,959.73
Fund: 30000 - Programme Cost Sharing		18,300.00	41,659.73	0.00	59,959.73
61305	Salaries - IP Staff	0.00	3,894.68	0.00	3,894.68
61310	Post Adjustment - IP Staff	0.00	1,378.63	0.00	1,378.63
62305	Dependency Allowances-IP Staff	0.00	567.18	0.00	567.18
62310	Contrib to Jt Staff Pens Fd-IP	0.00	1,377.87	0.00	1,377.87
62315	Contrib. to medical, social in	0.00	101.51	0.00	101.51
62320	Mobility, Hardship, Non-remova	0.00	662.82	0.00	662.82
62340	Annual Leave Expense - IP	0.00	506.46	0.00	506.46
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	513.65	0.00	513.65
63335	Home Leave Trvl & Allow-IP Stf	0.00	143.83	0.00	143.83
63350	Reimb of Income Tax-IP Staff	0.00	145.01	0.00	145.01
63530	Contribution to EOS Benefits	0.00	184.58	0.00	184.58
63535	Contribution to Security	0.00	210.93	0.00	210.93
63540	Contribution to Training	0.00	18.45	0.00	18.45
63545	Contribution to ICT	0.00	79.10	0.00	79.10
63550	Contributions to MAIP	0.00	2.62	0.00	2.62
63555	Contribution to UN JFA	0.00	147.68	0.00	147.68
63560	Contributions to Appendix D	0.00	13.18	0.00	13.18
64310	Separations - IP Staff	0.00	65.92	0.00	65.92
65115	Contributions to ASHI Reserve	0.00	524.70	0.00	524.70
65135	Payroll Mgt Cost Recovery ATLA	0.00	33.08	0.00	33.08
71305	Local Consult.-Sht Term-Tech	18,300.00	0.00	0.00	18,300.00
72399	Other Materials and Goods	0.00	26,646.40	0.00	26,646.40
75105	Facilities & Admin - Implement	0.00	4,441.45	0.00	4,441.45
Activity: ACTIVITY3.5 - 3-5 Dev'l of scaling up strate		0.00	11,417.63	0.00	11,417.63
Fund: 30000 - Programme Cost Sharing		0.00	11,417.63	0.00	11,417.63
61305	Salaries - IP Staff	0.00	3,894.72	0.00	3,894.72
61310	Post Adjustment - IP Staff	0.00	1,378.63	0.00	1,378.63
62305	Dependency Allowances-IP Staff	0.00	567.18	0.00	567.18
62310	Contrib to Jt Staff Pens Fd-IP	0.00	1,377.87	0.00	1,377.87
62315	Contrib. to medical, social in	0.00	101.51	0.00	101.51
62320	Mobility, Hardship, Non-remova	0.00	662.82	0.00	662.82
62340	Annual Leave Expense - IP	0.00	506.46	0.00	506.46
63330	Ed Grt Incl Trvl&Allow-IP Stf	0.00	513.65	0.00	513.65
63335	Home Leave Trvl & Allow-IP Stf	0.00	143.83	0.00	143.83
63350	Reimb of Income Tax-IP Staff	0.00	145.01	0.00	145.01
63530	Contribution to EOS Benefits	0.00	184.58	0.00	184.58
63535	Contribution to Security	0.00	210.93	0.00	210.93
63540	Contribution to Training	0.00	18.45	0.00	18.45
63545	Contribution to ICT	0.00	79.10	0.00	79.10
63550	Contributions to MAIP	0.00	2.62	0.00	2.62
63555	Contribution to UN JFA	0.00	147.68	0.00	147.68
63560	Contributions to Appendix D	0.00	13.18	0.00	13.18
64310	Separations - IP Staff	0.00	65.92	0.00	65.92
65115	Contributions to ASHI Reserve	0.00	524.67	0.00	524.67
65135	Payroll Mgt Cost Recovery ATLA	0.00	33.08	0.00	33.08
75105	Facilities & Admin - Implement	0.00	845.74	0.00	845.74
Activity: ACTIVITY3.6 - 3-6 Monitoring n Evaluation		0.00	889.70	0.00	889.70
Fund: 30000 - Programme Cost Sharing		0.00	889.70	0.00	889.70
71615	Daily Subsistence Allow-Intl	0.00	823.80	0.00	823.80
75105	Facilities & Admin - Implement	0.00	65.90	0.00	65.90
Activity: PMC - Project Management Cost		45,118.32	92,532.03	0.00	137,650.35
Fund: 04000 - TRAC (Lines 1.1.1 and 1.1.2)		0.00	14,733.82	0.00	14,733.82
64397	Services to projects -CO staff	0.00	9,402.25	0.00	9,402.25

72445	Common Services-Communications	0.00	213.00	0.00	213.00
73125	Common Services-Premises	0.00	2,416.15	0.00	2,416.15
74596	Services to projects -GOE	0.00	2,702.42	0.00	2,702.42
Fund: 30000 - Programme Cost Sharing		45,118.32	77,798.21	0.00	122,916.53
61105	Salaries - NP Staff	0.00	2,004.01	0.00	2,004.01
64397	Services to projects -CO staff	0.00	8,588.79	0.00	8,588.79
71205	Intl Consultants-Sht Term-Tech	0.00	6,450.00	0.00	6,450.00
71211	Intl Consult Security Charge	0.00	258.00	0.00	258.00
71305	Local Consult.-Sht Term-Tech	20,800.00	22,620.00	0.00	43,420.00
71360	Local Consult-Security	0.00	669.60	0.00	669.60
71405	Service Contracts-Individuals	12,733.50	6,931.70	0.00	19,665.20
71410	MAIP Premium SC	0.00	2.99	0.00	2.99
71415	Contribution to Security SC	0.00	239.74	0.00	239.74
71615	Daily Subsistence Allow-Intl	0.00	2,527.00	0.00	2,527.00
71635	Travel - Other	0.00	880.01	0.00	880.01
72311	Fuel, petroleum and other oils	586.51	0.00	0.00	586.51
72425	Mobile Telephone Charges	1,019.80	116.46	0.00	1,136.26
72440	Connectivity Charges	0.00	609.20	0.00	609.20
72445	Common Services-Communications	0.00	355.00	0.00	355.00
72505	Stationery & other Office Supp	980.90	0.00	0.00	980.90
72510	Publications	108.90	0.00	0.00	108.90
72815	Inform Technology Supplies	8,164.80	0.00	0.00	8,164.80
73125	Common Services-Premises	0.00	2,804.48	0.00	2,804.48
73405	Rental & Maint-Other Office Eq	0.00	260.00	0.00	260.00
74110	Audit Fees	0.00	2,085.00	0.00	2,085.00
74210	Printing and Publications	0.00	3,652.00	0.00	3,652.00
74220	Translation Costs	0.00	3,528.87	0.00	3,528.87
74225	Other Media Costs	0.00	992.50	0.00	992.50
74505	Insurance	497.13	0.00	0.00	497.13
74510	Bank Charges	226.78	0.00	0.00	226.78
74596	Services to projects -GOE	0.00	2,960.58	0.00	2,960.58
75105	Facilities & Admin - Implement	0.00	9,104.93	0.00	9,104.93
75705	Learning costs	0.00	157.35	0.00	157.35
Project Total:		422,862.94	602,715.06	0.00	1,025,578.00

Funds Utilization

Output: 00093203 - Building an Enabling Environme Implementing Partner: 00659 - Natl Council Sustainable Dev.	UNDP Amount
Outstanding NIM Advances:	0.00
Undepreciated Fixed Assets:	0.00
Unamortized Intangible Assets:	0.00
Inventory:	0.00
Prepayments:	0.00
Commitments:	0.00

Signed on behalf of UNDP:

Sonali Dayaratne

sonali.dayaratne@undp.org

Date: Feb 24, 2022

Signed on behalf of Implementing Partner:

TIN PonlokSecretary of State
National Council for Sustainable Development

Date: Mar 25, 2022

**THIRD-PARTY COST-SHARING AGREEMENT
BETWEEN SWEDEN, REPRESENTED BY THE SWEDISH INTERNATIONAL DEVELOPMENT
COOPERATION AGENCY -SIDA (THE DONOR) AND
THE UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)**

WHEREAS the Donor hereby agrees to contribute funds to UNDP on a cost-sharing basis for the implementation of [Project Number: 00085640 Title: Towards Environmental Sustainability in Cambodia],¹ as more fully described in the Prodoc, as attached in annex 1 and submitted to the Donor for information. The Donor project number is 12252;

WHEREAS UNDP is prepared to receive and administer the contribution for the implementation of the project;

WHEREAS the Government of Cambodia has been duly informed of the contribution of the Donor to the project;

WHEREAS UNDP shall designate an Implementing Partner for the implementation of the project (Implementing Partner).

NOW THEREFORE, UNDP and the Donor hereby agree as follows:

Article I. The Contribution

1. (a) The Donor shall, in accordance with the schedule of payments set out below, contribute to UNDP the amount of 16,500,000 SEK.

<u>Schedule of payments²</u>	<u>Amount</u>
Upon the signature of the Agreement	4,000,000 SEK
January 2019	12,500,000 SEK

(b) The contribution shall be deposited in SEK in the [bank and bank account].

NORDEA BANK SWEDEN A.B.

Foreign Customer Services

P.O.Box 16081/Drottninggatan 4

¹ The programme/project is described in the project document [Project Number: 00085640 Title: Towards Environmental Sustainability in Cambodia]. The project document is formally annexed to this Agreement. For UNDP programme activities carried out under the harmonized operational modalities, the project document is comprised of the CPAP and AWP.

² It is recommended that country offices negotiate the number of installments to ensure at least six months' anticipated disbursements are funded with each installment. This will make processing of contributions and reporting more efficient for the country offices.

SE - 103 22 Stockholm, Sweden

UNDP Contributions (SEK) Account

SE4530000000048491300046

SWIFT Code: NDEASESS

IBAN No.: SE4530000000048491300046

Bank Account Holder: UNDP

Currency of Account: SEK

(c) The Donor will inform UNDP when the contribution is paid via an e-mail message with remittance information to contributions@undp.org, providing the following information: donor's name, UNDP country office, [Project Number: 00085640 Title: Towards Environmental Sustainability in Cambodia], Donor reference (Contribution No. 12252). This information should also be included in the bank remittance advice when funds are remitted to UNDP.

2. The value of the payments, if made in a currency other than United States dollars, shall be determined by applying the United Nations operational rate of exchange in effect on the date of payment. Should there be a change in the United Nations operational rate of exchange prior to the full utilization by the UNDP of the payment, the value of the balance of funds still held at that time will be adjusted accordingly. If, in such a case, a loss in the value of the balance of funds is recorded, UNDP shall inform the Donor with a view to determining whether any further financing could be provided by the Donor. Should such further financing not be available, the assistance to be provided to the project may be reduced, suspended or terminated by UNDP.
3. The above schedule of payments takes into account the requirement that the payments shall be made in advance of the implementation of planned activities. It may be amended to be consistent with the progress of project delivery. Such amendments shall be made as written amendments to this agreement.
4. UNDP shall receive and administer the payments in accordance with the regulations, rules, policies and procedures of UNDP.
5. All financial accounts and statements shall be expressed in United States dollars.

Article II. Utilization of the Contribution

1. The implementation of the responsibilities of UNDP and of the Implementing Partner pursuant to this Agreement and the project document shall be dependent on receipt by UNDP of the contribution in accordance with the schedule of payments as set out in Article I, paragraph 1, above.
2. If unforeseen increases in expenditures or commitments are expected or realized (whether owing to inflationary factors, fluctuation in exchange rates or unforeseen contingencies), UNDP shall submit to the Donor on

a timely basis a supplementary estimate showing the further financing that will be necessary. The Donor shall use its best endeavours to obtain the additional funds required.

3. If the payments referred to in Article I, paragraph 1, above are not received in accordance with the payment schedule, or if the additional financing required in accordance with paragraph 2 above is not forthcoming from the Donor or other sources, the assistance to be provided to the project under this Agreement may be reduced, suspended or terminated by UNDP.

4. Any interest income attributable to the Contribution shall be credited to UNDP Account, retained by UNDP and shall be utilized in accordance with established UNDP procedures.

Article III. Administration and reporting

1. Project management and expenditures shall be governed by the regulations, rules, policies and procedures of UNDP and, where applicable, the regulations, rules and directives of the Implementing Partner.

2. UNDP shall provide to the Donor the following reports prepared in accordance with UNDP accounting and reporting procedures.

- (a) From the country office within six months after the end of each year of the activity period, an annual status report of project progress for the duration of the Agreement, as well as the latest available approved budget. This report shall be analytical in approach and include a presentation of progress made in the implementation of programmes/projects towards the achievement of results;
- (b) From UNDP Bureau of Management/Office of Finance and Administration, an annual certified financial statement as of 31 December every year to be submitted no later than 30 June of the following year;
- (c) From the country office within six months after the date of operational completion or termination of the Agreement, a final report summarizing project activities and impact of activities as well as provisional financial data;
- (d) From UNDP Bureau of Management/Office of Finance and Administration, on operational completion of the project, a certified final financial statement to be submitted no later than 30 June of the year following the financial closing of the project.

3. If special circumstances so warrant, UNDP may provide more frequent reporting at the expense of the Donor. The specific nature and frequency of this reporting shall be specified in an annex of the Agreement.

Article IV. Administrative and support services



NB

1. In accordance with the decisions and directives of UNDP's Executive Board reflected in its Policy on Cost Recovery from Other Resources, the Contribution shall be subject to cost recovery for *indirect costs incurred by UNDP headquarters and country office structures* in providing General Management Support (GMS) services. To cover these GMS costs, the contribution shall be charged a fee equal to 8%. Furthermore, as long as they are unequivocally linked to the specific project(s), all direct costs of implementation, including the costs of implementing partner, are identified in the project budget against a relevant budget line and borne by the project accordingly.

2. The aggregate of the amounts budgeted for the project, together with the estimated costs of reimbursement of related support services, shall not exceed the total resources available to the project under this Agreement as well as funds which may be available to the project for project costs and for support costs under other sources of financing.

Article V. Evaluation

All UNDP programmes and projects are evaluated in accordance with UNDP Evaluation Policy. UNDP and the Government of Cambodia in consultation with other stakeholders, including donors will jointly agree on the purpose, use, timing, financing mechanisms and terms of reference for evaluating a project including an evaluation of its contribution to an outcome which is listed in the Evaluation Plan. UNDP shall commission the evaluation, and the evaluation exercise shall be carried out by external independent evaluators. The evaluation reports shall be made available to the Donor.

Article VI. Equipment

Ownership of equipment, supplies and other properties financed from the contribution shall vest in UNDP. Matters relating to the transfer of ownership by UNDP shall be determined in accordance with the relevant policies and procedures of UNDP.

Article VII. Auditing

The contribution shall be subject exclusively to the internal and external auditing procedures provided for in the financial regulations, rules and directives of UNDP. Should the annual Audit Report of the Board of Auditors of UNDP to its governing body contain observations relevant to the contributions, such information shall be made available to the Donor.

Article VIII. Completion of the Agreement

1. Wherever the following terms are mentioned in this agreement, the definition for operational completion date is when the activity period of the project ends, as stipulated in the project agreement. The financial closing date, also called the expiry date, is 12 months after the operational completion date.

2. UNDP shall notify the Donor when all activities relating to the Swedish contribution have been completed. A certified final financial report on income and expenditures, including a statement of unused balances, prepared by the UNDP Comptroller will be sent to Sida no later than 18 months after the financial year



in which operational completion of project/programme takes place and the remaining balances of Sida has been reconciled and fully verified.

3. Notwithstanding the operational completion of the project, UNDP shall continue to hold unutilized payments until all commitments and liabilities incurred in the implementation of the project have been satisfied and project activities brought to an orderly conclusion until the expiry date of the project. UNDP shall not make any further disbursement after the financial closing date.

4. If the unutilized payments prove insufficient to meet such commitments and liabilities, UNDP shall notify the Donor and consult with the Donor on the manner in which such commitments and liabilities may be satisfied.

5. In cases where the Project is completed in accordance with the project document any funds below 5,000 USD (five thousand US Dollars) that remain unexpended after all commitments and liabilities have been satisfied shall be automatically reallocated by UNDP. Any funds above 5,000 USD (five thousand US Dollars) that remain unexpended after all commitments and liabilities have been satisfied shall be refunded to the donor or reallocated by UNDP, but only after consultation with the Donor.

Article IX. Termination of the Agreement

1. After consultations have taken place between the Donor, UNDP and the programme country Government, and provided that the payments already received are, together with other funds available to the project, sufficient to meet all commitments and liabilities incurred in the implementation of the project, this Agreement may be terminated by UNDP or by the Donor. The Agreement shall cease to be in force 30 (thirty) days after either of the Parties have given notice in writing to the other Party of its decision to terminate the Agreement.

2. Notwithstanding termination of all or part of this Agreement, UNDP shall continue to hold unutilized payments until all commitments and liabilities incurred in the implementation of all or the part of the project, for which this Agreement has been terminated, have been satisfied and project activities brought to an orderly conclusion until the termination date of the project. UNDP shall not make any further disbursement after the financial closing date.

3. In cases where the Project is completed in accordance with the project document any funds below 5,000 USD (five thousand US Dollars) that remain unexpended after all commitments and liabilities have been satisfied shall be automatically reallocated by UNDP. Any funds above 5,000 USD (five thousand US Dollars) that remain unexpended after all commitments and liabilities have been satisfied shall be refunded to the Donor or reallocated by UNDP, but only after consultation with the Donor.

Article X. Anti-corruption

The Parties agree that it is important to take all necessary precautions to avoid corrupt practices. To this end, UNDP shall maintain standards of conduct that govern the performance of its staff, including the prohibition of corrupt practices in connection with the award and administration of contracts, grants, or other

benefits, as set forth in the Staff Regulations and Rules of the United Nations, the UNDP Financial Regulations and Rules, and the UNDP Procurement Manual.

Article XI. Notices

The officers responsible for coordination of all matters related to this Agreement are:

For Sida:

For UNDP:

Name: Johanna Palmberg

Name: Rany Pen

Title: Programme Officer

Title: Head of Programme

Contact information: johanna.palmberg@gov.se

Contact information: rany.pen@undp.org

Article XII. Amendment of the Agreement

The Agreement may be amended through an exchange of letters between the Donor and UNDP. The letters exchanged to this effect shall become an integral part of the Agreement.

Article XIII. Entry Into Force

This Agreement shall enter into force upon the signature of this Agreement by the parties hereto, on the date of the last signature.

Based on the date of the first contribution and the activity period of the project, the operational completion date of the projects is therefore set to [31 December 2020].

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Agreement in the English language in two copies.

For Sweden, represented by Sida:
H.E. Maria Sargren
Ambassador of Sweden to Cambodia
Date : 2018-07-24

For the United Nations Development Programme:
Mr. Nick Beresford
Country Director of UNDP Cambodia
Date : 24-7-18

Annex: Project document dated 10 July 2018



Embassy of Sweden

20/11/2020
UM2018/25832/PHNO

Phnom Penh
Magnus André
magnus.andre@gov.se

Nick Beresford
Resident Representative
UNDP Cambodia

**Amendment NO. 02 to the Third-Party Cost Sharing Agreement
of the Project "Building an Enabling Environment for Sustainable
Development (BESD) contribution no. 12252"**

Dear Mr. Beresford,

With reference to the finance agreement between Sweden and UNDP regarding the contribution to the implementation of the Building an Enabling Environment for Sustainable Development (BESD) project and the discussion with you and your team, I'm sending you two signed copies of an agreement amendment. The Amendment will increase Sweden's financial contribution to the project and allow a continuation of activities until June 30th next year. The final payment will be released as soon as we have received a countersigned copy of the amendment and a disbursement request.

Best regards,


Samuel Hurtig

Head of Development Cooperation

Telephone: +855 (23) 86 17 00
Fax: +855 (23) 86 17 01

Postal address: P.O. Box 68, Phnom Penh, Cambodia
Street address: 10th floor, Phnom Penh Tower, 445 Monivong
Blvd, (St 93/232), Sangkat Boeung Pralit, Khan 7 Makara,
Phnom Penh
E-mail: ambassaden.phnom-penh@gov.se

**AMENDMENT No. 02 TO THE THIRD-PARTY COST-SHARING AGREEMENT
BETWEEN SWEDEN, REPRESENTED BY THE SWEDISH INTERNATIONAL
DEVELOPMENT COOPERATION AGENCY - SIDA (THE DONOR) AND
THE UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)**

Reference is made to the Agreement entered into on 24 July 2018, Donor Project Number 12252, between the UNITED NATIONS DEVELOPMENT PROGRAMME (“UNDP”), and SWEDEN, REPRESENTED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY – Sida (“the Donor”), and together with UNDP, the “Parties”, as previously amended on 1 October 2020 (hereinafter referred to as the “Agreement”).

WHEREAS The Agreement provides that any modification thereto shall require an amendment in writing between the Parties, duly signed by the authorized representatives of UNDP and the Donor.

WHEREAS UNDP has requested and the Donor has agreed to amend the Agreement for the Project **Title:** “Towards Environmental Sustainability in Cambodia”, which was changed to “Building an Enabling Environment for Sustainable Development (BESD)” following the decision of the first board meeting in 2019 (Project Number: 00085640, Donor Project Number: 12252). Through the Amendment, the Donor wishes to provide additional contribution to the project to support the implementation of the planned activities from January to June 2021. (Annex 1: BESD Extension Concept Note).

NOW THEREFORE, the Parties agree to amend the following articles of the Agreement:

Article I of the Amendment 1: The Contribution:

**Instead of:
Subsection (a)**

This Article is amended to add that the Donor (Sweden) will contribute the additional funds at the maximum of SEK 4,300,000.

The agreed amount of 16,500,000 SEK was disbursed in full during 2018 and 2019. The additional amount shall be used in accordance with the Project Document including updated Budget as attached as Annex 1.

The additional funds will be disbursed upon signature of this Amendment followed by a request.

The total maximum amount will thereby be increased up to 20,800,000 SEK.



**Shall now read:
Subsection (a)**

The Donor agrees to contribute the additional funds at the maximum of SEK 5,700,000. Thus, the total maximum amount will thereby be increased up to **SEK 26,500,000**.

Schedule of Payment	Amount
1) Upon signature of the original agreement	SEK 4,000,000 (disbursed)
2) January 2019	SEK 12,500,000 (disbursed)
3) October 2020	SEK 4,300,000 (disbursed)
4) Upon the signature of this Amendment	SEK 5,700,000 (to be disbursed)

The additional funds will be disbursed upon the signature of this Amendment followed by a request.

Except as expressly modified herein in accordance with Article I above, all other terms of the Agreement shall remain unchanged and shall continue in full force and effect.

This Amendment will come into effect as of the date of the last signature hereof by UNDP and the Donor.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Amendment in English language in two copies.

For UNDP
Mr. Nick Beresford
Resident Representative

For Sweden, represented by Sida
Mr. Björn Häggmark
Ambassador, Embassy of Sweden to
Cambodia

Signature: 

Date: 23.11.20

Signature: 

Date: 19/11/2020

Annex 1: BESD Extension Concept Note (01 January - 30 June 2021)

Annex 2: Updated Work Plan and Budget 2021





Expected Annual	Key Activities	Timeline		Responsible Party	Chart of account	Fund	Donor	Delop.ID	Account	Modality	Budget Description	Budget Note	Implementer	Schedule of payment		Total budget		
		Q1	Q2											Q1	Q2			
Output 1: CBNRM institutions strengthened and financial resources mobilized for sustainable NRM	Activity 1.1: Expansion and strengthening of CBNRM	X		NCSD	009466	30000	00555	KHM	71600	CA	Travel and Meeting	Field monitoring	NCSD	1 360,00	1 360,00	2 720,00		
		X	X	NCSD	009466	30000	00555	KHM	75700	CA	Training, Workshops & Conference	For 2 times of project board meeting, quarterly meeting and one time for reflection forum workshop	NCSD	2 395,00	13 875,00	16 270,00		
		X	X	NCSD	009466	30000	00555	KHM	71600	CA	Travel and Meeting	1) Conduct assessment meeting with CPA members on the needs of Job/Income; 2) Tour/exchange visits by 5 CPA committee members to Orchid Center, and 3) Community-based tree monitoring	GDLC/MOE	4 000,00	4 000,00	8 000,00		
		X	X	NCSD	009466	30000	00555	KHM	75700	CA	Training, Workshops & Conference	1-Meetings to develop activity plan to implement CPA Mgt Plan; 2) Quarterly meeting to review and motor CPA Mgt Plan; 3) Training of Trainers for skill development, 4) Selecting CPA Members for the vocational training (3 vocational trainings on Making basket, Cooking and Organic Vegetables)	GDLC/MOE	10 000,00	10 000,00	20 000,00		
		X	X	NCSD	009466	30000	00555	KHM	75700	CA	Training, Workshops & Conference	Support to tree planting maintenance at project side	GDLC/MOE	5 000,00	5 000,00	10 000,00		
		X	X	NCSD	009466	30000	00555	KHM	71400	CA	Contractual Services - Individuals	Over head cost for administration and finance assistant	GDLC/MOE	1 500,00	1 750,00	3 250,00		
		X	X	NCSD	009466	30000	00555	KHM	72500	CA	Supplies	Office supplies	GDLC/MOE	200,00	350,00	550,00		
		X	X	NCSD	009466	30000	00555	KHM	74500	CA	Miscellaneous Expenses	Bank changes, cheques	GDLC/MOE	100,00	100,00	200,00		
		X	X	UNDP	009466	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	1 964,40	2 914,80	4 879,20		
		X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P4)-5%	UNDP	2 608,00	2 608,00	5 216,00		
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	NRM specialist (SB5)-10%	UNDP	1 018,00	1 018,00	2 036,00		
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	290,08	290,08	580,16		
		Total Activity 1.1:														30 435,48	43 265,88	73 701,36
		Activity 1.2: Operationalization of payment for Ecosystem Services	Activity 1.2: Operationalization of payment for Ecosystem Services	X	X	NCSD	009466	30000	00555	KHM	71300	CA	Local Consultants	National consultants for designing and monitoring PES, fund management, monitoring system, and PES policies	DBD/NCSD	10 000,00	10 000,00	20 000,00
				X	X	NCSD	009466	30000	00555	KHM	71400	CA	Contractual Services - Individuals	Support to contracted staffs (x 1 finance assistant)	DBD/NCSD	1 800,00	1 800,00	3 600,00
X	X			NCSD	009466	30000	00555	KHM	72500	CA	Supplies	Office supplies, COVID supplies	DBD/NCSD	690,00	690,00	1 380,00		
X	X			NCSD	009466	30000	00555	KHM	74200	CA	Audio Visual Print Prod Costs	Printing and designing of PES related fund management, monitoring system, and PES policies	DBD/NCSD	4 000,00	4 000,00	8 000,00		
X	X			NCSD	009466	30000	00555	KHM	75700	CA	Training, Workshops & Conference	Training on PES for Phnom Kulen and Kbal Chhay	DBD/NCSD	10 000,00	15 000,00	25 000,00		
X	X			NCSD	009466	30000	00555	KHM	74500	CA	Miscellaneous Expenses	Bank charge, etc	DBD/NCSD	10,00	10,00	20,00		
X	X			UNDP	009466	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	2 120,00	2 520,00	4 640,00		
X	X			UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P4)-5%	UNDP	2 608,00	2 608,00	5 216,00		
X	X			UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	NRM specialist (SB5) - 10%	UNDP	1 018,00	1 018,00	2 036,00		
X	X			UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	290,08	290,08	580,16		
Total Activity 1.2:														32 536,08	37 936,08	70 472,16		
Activity 1.3: Development of strategic Communication strategy and information materials	Activity 1.3: Development of strategic Communication strategy and information materials	X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	NRM specialist (SB5)-10%	UNDP	1 018,00	1 018,00	2 036,00		
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	81,44	81,44	162,88		
Total Activity 1.3:														1 099,44	1 099,44	2 198,88		
Activity 1.4: Development of scaling-up strategies including programming and new partnership	Activity 1.4: Development of scaling-up strategies including programming and new partnership	X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	NRM specialist (SB5)-10%	UNDP	1 018,00	1 018,00	2 036,00		
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	81,44	81,44	162,88		
Total Activity 1.4:														1 099,44	1 099,44	2 198,88		
Activity 1.5: Monitoring and evaluation	Activity 1.5: Monitoring and evaluation	X	X	UNDP	001981	30000	00555	KHM	71600	DP	Travel and Meeting	Field monitoring	UNDP	2 000,00	2 000,00	4 000,00		
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	160,00	160,00	320,00		
Total Activity 1.5:														2 160,00	2 160,00	4 320,00		
Total Output 1:	Total Output 1													67 330,44	85 560,84	152 891,28		

Expected Annual	Key Activities	Time		Responsible Party	Chart of account				Modality	Budget Description	Budget Note	Implementer	Schedule of payment		Total budget	
		Q1	Q2		Implementing Agent	Fund	Donor	Detp.ID					Account	Q1		Q2
Output 3: Improved access to clean, affordable, and sustainable energy for the rural poor	Activity 3.1: Solar energy for electricity supply and increasing resilience of rural communities	X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P5)-5%	UNDP	3 750,00	3 750,00	7 500,00
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	National Energy Officer (SB4)- 20%	UNDP	1 595,00	1 595,00	3 190,00
			X	UNDP	002452	30000	00555	KHM	72100	CA	Contractual Services Companies	Setting the right business model for solar DC micro grid as an off-grid energy solution based on the experience from two pilots	UNDP	5 000,00	5 000,00	10 000,00
		X	X	UNDP	002452	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	827,60	827,60	1 655,20
	Total Activity 3.1:													11 172,60	11 172,60	22 345,20
	Activity 3.2: Building technical capacity for installation of solar, and their maintenance	X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P5)-10%	UNDP	7 500,00	7 500,00	15 000,00
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	National Energy Officer (SB4)- 20%	UNDP	1 595,00	1 595,00	3 190,00
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)		UNDP	727,60	727,60	1 455,20
	Total Activity 3.2:													9 822,60	9 822,60	19 645,20
	Activity 3.3: Strategic Communication and awareness raising	X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P5)-5%	UNDP	3 750,00	3 750,00	7 500,00
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	National Energy Officer (SB4)- 20%	UNDP	1 595,00	1 595,00	3 190,00
		X	X	UNDP	001981	30000	00555	KHM	71200	DP	International Consultant	Developing booklet, factsheets and other materials	UNDP	5 000,00	5 000,00	10 000,00
		X	X	UNDP	001981	30000	00555	KHM	72100	CA	Contractual Services Companies	Exhibition of in-country case studies	UNDP	7 500,00	7 500,00	15 000,00
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	1 427,60	1 427,60	2 855,20
		X	X	MME	002452	30000	00555	KHM	72400	DP	Commune & Audio Visual Equip	Promotional video clips and educational materials	MME	5 000,00	5 000,00	10 000,00
		X	X	MME	002452	30000	00555	KHM	72400	CA	Commune & Audio Visual Equip	Communication relating to solar energy	MME	100,00	100,00	200,00
		X	X	MME	002452	30000	00555	KHM	71400	CA	Contractual Services - Individuals	Salary for contract staff on finance assistant to support MME	MME	750,00	1 000,00	1 750,00
		X	X	MME	002452	30000	00555	KHM	74500	CA	Miscellaneous Expenses	Bank charges, cheques, office supplies	MME	250,00	250,00	500,00
	X	X	UNDP	002452	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	488,00	508,00	996,00	
	Total Activity 3.3:													25 866,60	26 130,60	51 997,20
	Activity 3.4: Development of enabling policies and measures	X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P5)-10%	UNDP	7 500,00	7 500,00	15 000,00
		X	X	UNDP	001981	30000	00555	KHM	71200	DP	International Consultants	International Consultant for developing localized energy efficiency design guideline for new residential and commercial buildings using simulation study	UNDP	10 000,00	10 000,00	20 000,00
		X	X	UNDP	001981	30000	00555	KHM	72300	DP	Materials & Goods	Pilot demonstration of EE solutions in public buildings	UNDP	15 000,00	15 000,00	30 000,00
		X	X	MME	002452	30000	00555	KHM	71300	DP	Local Consultants	National Consultant for developing localized energy efficiency design guideline for new residential and commercial buildings using simulation study	MME	3 000,00	3 000,00	6 000,00
		X	X	MME	002452	30000	00555	KHM	75700	DP	Training, Workshops & Conference	Consultation with private and public sector stakeholders on EE design guidelines, 2-	MME	1 500,00	3 000,00	4 500,00
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	National Energy Officer (SB4)- 10%	UNDP	797,50	797,50	1 595,00
		X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	3 023,80	3 143,80	6 167,60
	Total Activity 3.4:													40 821,30	42 441,30	83 262,60
	Activity 3.5: Development of scaling-up strategies including programming and new partnership	X	X	UNDP	001981	30000	00555	KHM	61300	DP	Salary & Post Adj Cost-IP Staff	IP staff (P5)-10%	UNDP	7 500,00	7 500,00	15 000,00
		X	X	UNDP	001981	30000	00555	KHM	71400	DP	Contractual Services - Individuals	National Energy Officer (SB4)- 10%	UNDP	797,50	797,50	1 595,00
			UNDP	001981	30000	00555	KHM	75700		Training, Workshops & Conference	1 business talk and 2 consultation workshops	UNDP	3 000,00	3 000,00	6 000,00	
X		X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	903,80	903,80	1 807,60	
X		X	MME	002452	30000	00555	KHM	74200	DP	Audio Visual&Print Prod Costs	Translation	MME	4 000,00	4 000,00	8 000,00	
X	X	UNDP	002452	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	320,00	320,00	640,00		
Total Activity 3.5:													16 921,30	16 921,30	33 842,60	
Activity 3.6: Monitoring and Evaluation	X	X	UNDP	001981	30000	00555	KHM	71800	DP	Travel and Meeting	Field monitoring	UNDP	1 500,00	1 500,00	3 000,00	
	X	X	UNDP	001981	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	GMS	UNDP	128,00	128,00	240,00	
Total Activity 3.6:													1 628,00	1 628,00	3 240,00	
Total Output 3:													105 818,40	107 708,40	213 526,80	
Project Management Cost	Project Management Cost	X	X	NCSD	009466	30000	00555	KHM	71300	CA	Local Consultants	Cost for National Project Coordinator (Basic Salary and old age)	NCSD	10 560,00	12 320,00	22 880,00
		X	X	NCSD	009466	30000	00555	KHM	72800	CA	Information Technology Equipmt	This cost is for gasoline	NCSD	400,00	400,00	800,00
		X	X	NCSD	009466	30000	00555	KHM	72400	CA	Commune & Audio Visual Equip	This is for communication for the staff in PMU	NCSD	360,00	360,00	720,00
		X	X	NCSD	009466	30000	00555	KHM	71400	CA	Contractual Services - Individuals	This cost is for contract services (1. Finance officer 2. Admin Officer and a project driver)	NCSD	6 465,00	7 545,00	14 010,00
		X	X	NCSD	009466	30000	00555	KHM	72500	CA	Supplies	Supply cost	NCSD	600,00	600,00	1 200,00
		X	X	NCSD	009466	30000	00555	KHM	72300	CA	Materials & Goods	This is for maintenance, tuner...etc	NCSD	600,00	600,00	1 200,00
		X	X	NCSD	009466	30000	00555	KHM	74500	CA	Miscellaneous Expenses	Bank charge .etc	NCSD	100,00	100,00	200,00
		X	X	UNDP	009466	30000	00555	KHM	75100	DP	Facilities & Administration (GMS)	Facilities & Administration (GMS)	UNDP	1 526,80	1 754,00	3 280,80

Annex 1- BESD Extension Concept Note
Proposal for priority activities from January to June 2021
Building an Enabling Environment for Sustainable Development (BESD)

About the BESD project

While Cambodia has attained impressive economic growth over the last 20 years, it faces a new set of environmental challenges such as 1) degradation of natural resources; 2) growing volume of waste, and; and 3) limited access to affordable, sustainable and clean energy among the poor. These challenges will have disproportionately adverse impacts on the poor and marginalized in both urban and rural settings, including issues relating to access to clean water, productive land and sustainable livelihoods, as well as affecting the health and quality of life of these populations¹.

The BESD Project seeks to strategically position Cambodia's path towards achieving the Sustainable Development Goals (SDGs) related to 1) *natural resources management (NRM)*; 2) *circular economy*; and 3) *clean, affordable and sustainable energy*. These SDGs will have positive multiplier effects on achieving other goals, including on poverty, gender, livelihoods, equality and governance. To achieve this objective, the Project designs and tests *innovative* environmentally sustainable models in the targeted areas through public and private partnerships. Based on evaluating results, the Project further identifies venues for scaling-up effective models. The Project will attain the following three outputs:

- **Output 1:** CBNRM institutions strengthened and financial resources mobilised for sustainable NRM
- **Output 2:** Waste reduced, recycled and reused through application of circular economy models
- **Output 3:** Improved access to clean, affordable, and sustainable energy for the rural poor

Key guiding principles for all the three outputs

The following sections present the main objectives, the key progress achieved in 2019 and 2020 as well as new priorities for 2021 for each of the three outputs. The project applies **the human rights-based approach**, which builds upon the principles of non-discrimination, participation, transparency, accountability and do no harm for all outputs.

- **Non-discrimination:** The project will ensure that all women, men, girls and boys have equal access to participate in decision-making processes and to benefit from economic opportunities, natural resources, environment and energy for their health and well-being. By taking into consideration the varied interests and needs of people of different genders, ethnicities, ages, and abilities, the project seeks to reduce inequality and to support economic and social development for all.
- **Inclusion and participation with special attention to the most vulnerable and to gender equality:** The project will ensure that all concerned actors have the rights and ability to participate freely in decision-making and in activities that affect them and their environment. Special attention will be paid to the poor and marginalised, including women and girls, who are among the most vulnerable to environmental degradation and have limited access to economic opportunities.

The project will apply the Free, Prior and Informed Consent (FPIC) principle to ensure that all relevant stakeholders are fully informed about, and accepting of, the activities that may affect them. The principle will also be promoted among decision-makers when critical decisions affecting community assets, natural resources and activities.

Drawing on full consultations, the project will incorporate the perspectives of vulnerable participants of all genders in designing and implementing activities and support their ability to benefit equitably from these activities. For instance, the project seeks to enhance the ability of vulnerable members under community based Natural Resources Management (NRM) institutions to design and implement priority activities under Payments for Ecosystem Services (PES) (output 1). The project will engage

¹ There have been varied attempts at communication about these adverse impacts by local communities, but it has so far proven difficult to change the situation, not least on account of the unequal status of rural people and government.

informal waste pickers, who are currently excluded from the formal economy, to take an active role in recycling activities under the circular economy model (output 2). The project will also target the most vulnerable off-grid households for provision of solar energy (output 3).

The project will furthermore ensure that measures will promote equal participation of all and prevent “elite capture,” in which powerful actors monopolize decision-making processes and benefits. These measures include FPIC, requirements of full consultation and participation of vulnerable segments of the target population in decision-making and implementation, and effective monitoring of adherence to the requirements throughout the project duration.

- **Transparency:** The project will ensure accessible and timely provision of information related to the project activities. For instance, the success of PES is linked to the willingness of public and private sectors to pay for the Fund for ecosystem conservation (output 1). Thus, it is critical to ensure that payments collected are transferred in a timely manner to the institutions and communities charged with conserving and protecting natural resources. Delays in payments that support the intended activities will inevitably undermine the payers’ trust in the system and eventually compromise its success. The project will therefore promote clear and effective mechanisms of fund- collection and transfer, and regularly disclose the fund volume and kinds of activities supported by the fund.
- **Accountability:** The project will promote result-oriented management, which centers on effective monitoring of, and systems for, direct feedback about project implementation. This allows for early identification and correction of problems and strengthens the accountability of all actors.
- **Do No Harm:** The project will be designed to reflect the cultural, socio-economic and political aspects of the local context, and to anticipate possible unintended and negative consequences deriving from the interaction between the project activities, targeted beneficiaries and the context.

In addition to the human rights-based approach, the project will also incorporate **political economy** perspectives in designing and implementing the project activities. This is based on the understanding that mere provision of policies, rules, regulations, and technical solutions will not solve a particular developmental challenge, especially if powerful actors oppose the proposed solution. Development outcomes are shaped not only by rules and regulations but also by the dynamic interactions between actors with different levels of power, and varied interests and motivations. Gaining a full understanding of power dynamics, which are often hidden, and of the motivations and interests of involved actors, is therefore crucial in order to identify and share realistic and effective pathways for change.

For example, the political economy perspective has been applied to select a pilot city for circular economy (output 2). In Phnom Penh, the capital of Cambodia, powerful interests hold control over current waste management. Since transforming current waste management practices may go against these vested interests, it is likely to face formidable implementation challenges. In contrast, Kep, while much smaller, is a city where the interests of influential actors are relatively supportive of piloting circular economy. On this basis, the project selected Kep as an ideal first site to demonstrate the potentials of the CE model. The model will be applied to larger cities later on.

The activities related to energy (output 3) also incorporate considerations of political economy. Despite the clear potentials of solar energy in Cambodia, powerful vested interests in coal and hydropower have created major barriers to implementation. In addition to economical and technical justifications for solar, the project team has therefore sought strategic ways of influencing actors through capacity building on the regulatory frameworks to facilitate mainstreaming of solar energy in the country.

The relevance of the project to the Sustainable Development Goals

This project directly contributes to the targets that Cambodia set as part of its SDGs such as **SDG 1** (No poverty), **SDG 3** (Good health and wellbeing), **SDG 4** (Quality education), **SDG 5** (Gender equality), **SDG 6** (Clean water and sanitation), **SDG 7** (Affordable and clean energy), **SDG 8** (Decent work and economic growth), **SDG 9** (Industry Innovation, and Infrastructure), **SDG 11** (Sustainable cities and communities),

SDG 12 (Responsible consumption and production), **SDG 13** (Climate action), **SDG 14** (Life below water), **SDG 15** (Life on land), and **SDG 17** (Partnerships for the goals).

Acronyms

ADB	Asian Development Bank
CBNRM	Community Based Natural Resource Management
EAC	Electricity Authority of Cambodia
EDC	Electricité Du Cambodge
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GDEP	General Directorate of Environmental Education
GDLC	General Directorate of Local Community
GDANCP	General Department of Administration for Nature Conservation and Protection, MoE
GEF	Global Environment Facility
GHG	Greenhouse Gas
GSSD	General Secretariat for Sustainable Development
INRM	Integrated Natural Resources Management
MEF	Ministry of Economy and Finance
MME	Ministry of Mines and Energy (formerly MIME)
MoC	Ministry of Commerce
MoIH	Ministry of Industry and Handicraft
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MoI	Ministry of Interior
MoT	Ministry of Tourism
MoWRAM	Ministry of Water Resources and Meteorology
NCDDS	National Committee for Sub-National Democratic Development
NCSD	National Council for Sustainable Development
NGO	Non-Governmental Organisation
NPASMP	National Protected Areas Strategic Management Plan
NRM	Natural Resource Management
PA	Protected Area
PDOE	Provincial Department of Environment
PES	Payment for Ecosystem Services
PPA	Power purchasing agreement
PPP	Public Private Partnership
PV	Photovoltaics
RGC	Royal Government of Cambodia
RUPP	Royal University of Phnom Penh
SDG	Sustainable Development Goal
SHS	Solar Home System
SME	Small and Medium Enterprise
SIDA	Swedish International Development Cooperation Agency
SREP	Scaling-up Renewable Energy for Low Income Countries Programme
SWM	Sustainable Waste Management
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD Programme
USAID	United States Agency for International Development
WB	World Bank

Output 1

CBNRM institutions strengthened and financial resources mobilised for sustainable NRM

Background for the Output 1 activities on NRM

In recent years, the Royal Government of Cambodia (RGC) has made significant advancements in strengthening a national conservation agenda. Cambodia has expanded its system of protected areas (PAs) that now represents over 41% of the country (7.3 million ha of land). This system is not only rich in biodiversity but also provides a range of ecosystem services (such as clean water, air, carbon storage, and wildlife habitat) that are part of a nation's wealth, or its "natural capital".

This network of PAs is however under heavy pressure. Among others, rapid economic development and unauthorized forestland encroachments have contributed to a loss of natural habitats and degradation of forests in many upstream watersheds². This in turn has significantly impacted the recharge of groundwater, downstream fisheries as well as carbon sequestration capacities. It also negatively impacts the livelihoods of many rural people, especially women and the poor, who are dependent on forests for subsistence and income.

These challenges persist largely due to limited human and financial resources available to effectively manage this vast PA system. At present, 7.3 million ha of protected landscapes are managed by just 1,260 Rangers (i.e. over 5,000 ha/Ranger). Moreover, the allocation of government budget to implement conservation efforts remains minimal. Despite more than doubling the size of the PA system over the past 5 years, the MoE's annual budget has remained below 0.5% of the National Budget³. This is not adequate for sustainably managing 41 % of Cambodia's total land area.

To respond to these challenges, the RGC has expanded opportunities for communities to engage in NRM, including establishment of more Community Protected Areas (CPAs). Additionally, in 2016, the RGC released an official order (*sochor nor*) to advance dialogue on Payment for Ecosystem Services (PES) as a new sustainable financing option to mobilise additional financial resources for PA management. The RGC designated two locations: Phnom Kulen in Siem Reap Province and Kbal Chhay in Sihanoukville Province, as pilot PA sites to test PES feasibilities referring to the vital role of these watersheds in providing clean water for tourism, which is a cornerstone of the country's economy. Using lessons from these pilots, the Government plans to introduce a national payments policy.

Phnom Kulen National Park-PKNP: The PKNP covers 34,700 ha of upper watersheds, which provides water to the downstream Siem Reap town. The primary threats to these ecosystem services include illegal logging, conversion of forests for cashew plantation and illegal land grabbing for settlements⁴. The depletion of forests in the PKNP has caused groundwater shortages, with possible adverse impacts on the stability of the foundations of the World Heritage Angkor Wat Temples as well as the future development and tourism opportunities of Siem Reap Province.

Kbal Chhay Multiple Use Area-KCMUA: The site is much smaller (5,520 ha) and has no Management Plan. This area contains the only water source for Sihanoukville town. The primary threats to these ecosystem services include forest encroachment in the water catchment and illegal land grabbing for settlements. The ANCO Water Supply Co. Ltd. holds a concession license to pump, treat and sell water to both the Preah Sihanouk Water Authority and ANGKOR Beer. The demand for water is expected to increase, as the Sihanoukville area is experiencing significant growth, and reach a peak in 2023.

² Royal Government of Cambodia. (2017). National REDD+ Strategy 2017-2026.

³ Royal Government of Cambodia. (2020). Law on National Budget 2020.

⁴ Ministry of Environment. (2018). Management Programme Kulen Mountain National Park 2018-2027.

Key objectives

In support of the ongoing efforts of MoE to address human and financial resource challenges in managing protected areas, Output 1 activities aim to design and pilot innovative solutions that will contribute to strengthening of the role of local communities and stakeholders in managing natural resources and ecosystem services (Activity 1.1) and to the sustainable financing of PAs (Activity 1.2). In addition to working in the two pilot sites (PKNP and CBMUA), the Project is also developing synergies and enabling strategies at the national level to mobilize support for PES.

Main activities and key progress to date

Below lists key activities and progress made by the project up to June, 2020.

Activity 1.1. Expansion and strengthening of community based NRM (CBNRM)

The Project supported the CBNRM gender assessments, awareness raising and training workshops, provisions of alternative livelihood options, and boundary demarcation.

- **CBNRM gender assessments:** The Project completed detailed gender assessments of CBNRM to enhance opportunities for women to participate in the management of Community Protected Areas (CPAs) inside PKNP. Its recommendations have been incorporated for a number of awareness raising and training workshops were facilitated for local villagers in PKNP.
- **Building the capacities of CPAs and its network:** The Project conducted a series of meetings and workshops to promote the concepts of CBNRM, to support the effective operation of a CPA network, and to clarify the roles and responsibilities of villagers with respect to setting by-law regulations and dealing with illegal activities. Enhanced opportunities for women to participate in the CPA management committees were also explored.
- **Support for alternative livelihood activities:** The Project provided alternative livelihood options to cashew nut plantation (a major driver of deforestation) for marginalized villagers in Po Pel village that manages one of the CPAs inside PKNP. The initial support to build a water distribution system has been targeted to 23 families (including 95 females and 100 children), along with the aim to alleviate the workloads of women in the village.
- **Boundary demarcation to prevent encroachment:** Clear boundary demarcation of the Park boundaries and the boundaries of CPAs located inside the Park are prerequisite to prevent illegal encroachments. The Project facilitated the placing of over 100 marked and geo-referenced posts to protect CPAs and a 900-ha watershed of the Klah Khmum village.

Activity 1.2. Operationalizing Payment for Ecosystems Services (PES) in Cambodia

The Project conducted PES feasibility studies in the two pilot sites to propose options for PES operationalization and organized a national policy dialogue on PES. All the background assessments and design features for PES schemes in the two pilot sites will be completed by the end of 2020.

- **An assessment of the Phnom Kulen watershed to analyse the link between deforestation and water supply:** The assessment predicted severe water shortages for the tourism and agriculture sectors due to ongoing deforestation in the upstream Kulen Mountain watershed, and an increase in water demand in the downstream Siem Reap town⁵. It highlighted the need for sustainable financing mechanisms to ensure the protection of forests and watershed services from PKNP.
- **A review on "Willingness-to-Pay" (WTP) for Phnom Kulen:** This WTP review found both visitors to the Park and the tourism industry were willing to contribute funds to support park management (e.g. an average of US\$1.7 per local tourist and US\$5.2 for a foreign visitor and an annual contribution

⁵ UNDP Cambodia. (2020). Assessment of water quality and quantity in Phnom Kulen National Park of Stung Siem Reap Watershed. Technical Report.

of US\$81 (hotels), US\$58 (guest houses) and US\$45 (tour operators)⁶. WTP respondents also highlighted the need for transparency in fund management and ensuring the revenues collected were directed to PKNP management.

- **Policy recommendations to operationalise a PES scheme for Kbal Chhay:** The Project analyzed an existing legal framework and developed a set of policy recommendations for a PES scheme for the Minister's consideration. These included 1) reviewing the nature of the ANCO water license (including the rights to collect entry fees); 2) allocating US\$40,000/year from the Environmental and Social Fund to initiate priority management actions; 3) establishing a PES mechanism along with a draft operational guideline to mobilize funds from the tourism and industry sectors on a voluntary basis in 2020, making the payments compulsory by 2021; 4) establishment of a multi-stakeholder committee to oversee the operations of the KCMUA PES Fund and 5) a proposed institutional arrangement for PES linked to the Environmental and Social Fund.
- **A National Dialogue on "Payment for Ecosystem Services in Cambodia":** The Project organized this dialogue in September 2019 with over 160 participants. The dialogue concluded with identification of short and medium-term interventions that have been incorporated in the Output 1 work plan for 2020 and in the priorities for 2021- 2023. In addition, the NCSA has advanced policy dialogues between key Ministries (MoE, MAFF, MEF and MoT) with the aim of operationalizing PES.

Activity 1.5 and 1.6: Strategic communication and awareness raising & Development of scaling-up strategies including programming and new partnerships

The Project has facilitated synergies and raised interest for PES among other development partners in Cambodia, including FAO, ADB, GEF and REDD+. Significantly, the UNDP-led global Biodiversity Finance Initiative (BIOFIN) has added Cambodia to its target countries⁷.

A National PES Strategy with enabling regulations will be developed to scale-up best practices from the pilot sites and enhance new partnerships to sustain PES efforts in the longer term.

Remaining Gaps and Priorities for January to June 2021

Thus far, the project has made important progress in enhancing the capacities of CBNRM institutions as well as providing evidence-based policy recommendations for operationalizing PES schemes.

Remaining gaps: In order to realise a sustainable financing mechanism for Cambodia, the two pilot PES sites should be fully operationalized along with an enabling regulatory framework. Such a framework needs to clearly define PES fund sources, fund collection mechanisms, roles and responsibilities of different actors and priority activities to conserve and protect watersheds under the PES scheme.

The sustainability of the PES scheme also depends on an enabling national PES strategy to clearly define priority actions to systematically mobilise external funding or revenues collected from fees, fines and taxes back into the national PA system to cover operational costs, and habitat restoration efforts. Priorities for January and June 2021 include:

1. Operationalize PES for Phnom Kulen and Kbal Chhay (MoE, PDoE, MLMP, MoI, MEF)

The Project will establish and operationalize two pilot PES Funds for Kulen Mountain and Kbal Chhay and develop enabling regulations. At the initial stage, it will establish multi-stakeholder PES Management Committees on both sites for designing and operationalizing the Fund. This work entails:

⁶ UNDP Cambodia. (2020). Willingness To Pay Survey for PES in Phnom Kulen National Park. Technical Report.

⁷ BIOFIN developed a number of technical papers (e.g. Biodiversity Expenditure Review, Biodiversity Financial Needs Assessment, and Policy and Institutional Review) that will serve as a basis for developing a Biodiversity Finance Plan under the next phase of BESD.

- **Development of a Management Plan for PES for Kbal Chhay:** A Management Plan for the Kbal Chhay watershed will be developed (note: PKNP already has an approved Management Plan);
- **Defining key priority actions** in alignment with Management Plans, including reforestation, demarcation, capacity building activities to actively engage local communities, and other relevant stakeholders (government and private sector) in addressing current threats by land encroachment and settlements. Implementation of these actions will directly involve the forest dependent communities, Rangers and the private sector. Regular monitoring of service delivery will be done to ensure transparency and broad participation;
- **Defining funding sources and mechanisms for PES fee collection:** Given that potential revenues from PA entry fees and hotel taxes may be reduced as a result of COVID-19, the Project will explore additional PES opportunities. For Kulen, this could include a modest % of water fees charged by the Provincial Water Authority (focused on private sector use), in addition to a share of the current airport tax (e.g. US\$1 each for international travelers). For Kbal Chhay, potential fund sources include a modest % of the water user fees charged by ANCO, CSR contributions by ANGKOR Beer, and airport fees for international travellers and contributions by tourism operators and businesses (e.g. hotels, Casinos, guest houses) in Sihanoukville. The Project seeks to mobilize payments from the private sector on a voluntary basis during 2020-22 and made compulsory by 2023;
- **Defining institutional arrangements** including the roles of different government agencies and other stakeholders on revenue collection, disbursement and monitoring of fund management;
- **Completing negotiations between the supply and demand sides** to reach agreements on the type and size of initial investments in the protection of the PKNP and KCMUA; and
- **Overseeing transparency and accountability in revenue collection and disbursement.** Disbursements will be made through annual operational budgets determined under the Project based on clear roles of government and local communities in undertaking proposed activities.

The Project will ensure that women and the most vulnerable groups are empowered to participate in all aspects of planning, management and decision-making processes, described below.

2. Develop a Draft National PES Strategy (NCSD, GSSD, MoE, MEF)

The root cause of ecosystem degradation is attributed to the fact that many ecosystem services remain "invisible" to most people, rarely monetized, and often assumed to be free, like clean water. Building on the BIOFIN work, the Project will make visible how the Cambodia's PA system and biodiversity contributes to the GDP growth indirectly and directly. The factor will be integrated into the development of a national strategy and supporting financial reforms.

- **Development of a National PES strategy and Action Plan (including a proposed implementing plan):** The Strategy will identify priority actions and a roadmap for upscaling PES pilots to the national level while ensuring the strategy to be realistic and implementable. The short-term focus will be to mobilize funding for the MoE and provincial PA agencies (PDoEs) over and beyond allocations from the National Budget to ensure the effective implementation of priority actions in existing PA Management Plans (2021-2023). Over the long term (2024-2031), a national payment scheme for environmental services will be in place to benefit conservation and collaborative management efforts across PAs in Cambodia in alignment with the National Protected Area Strategic Management Plan (2017-2031).

The above PES Strategy and Action Plan will draw lessons from the global BIOFIN initiative and include a broader Biodiversity Finance Plan to mobilize financial resources ranging from realigning national budgets and introducing environmental taxes on the private sector to implementing PES-like schemes for PAs.

3. Promote knowledge management, capacity building and awareness raising

- **Strengthen knowledge management and communication through the existing cleaning house mechanism (CHM)⁸ to promote information sharing and database system on PES.**
- **Reinforce awareness raising and partnerships (NCSD, MoE [GDLC], MoEYS, MoWRAM):** Improved understanding of the value of biodiversity conservation to sustainable development is essential to address the persistent threats to ecosystem services. Vocational training will be provided to local communities in promoting organic farming and alternative and sustainable livelihood opportunities. Capacity building support will be provided for both women and men for the effective implementation of PES and sustainable livelihoods. Building on the results of COVID-19 response activities supported in 2020, the project will continue to engage the vulnerable groups in the maintenance of the planted trees in Community Protected Areas. The aim is to strengthen their ability to cope with economic shocks caused by COVID-19 by creating employment opportunities while enhancing the ecosystem services that provide food, fiber, shelter, and fresh water for the people.

4. Strengthen partnerships and support programming:

The Project will continue to strengthen partnerships with relevant partners in civil society, private sector, and governments

⁸ CHM is a channel for sharing good practices with (international) outsiders and can be part of the GIS database within the Ministry of Environment to improve data and information management and sharing.

Output 2

A Circular Economy as a Solution for Waste

Background: The growing volume of waste is a new environmental challenge for Cambodia

In Cambodia, the combination of rapid population growth and economic development has led to an exponential surge in the volume of municipal and industrial solid waste, which is presently turning into a significant challenge for waste management.

Current rates of solid waste disposal in municipal landfills are expected to double by 2029, reaching 2.1 million tons per year. This will likely exceed the capacity of all existing landfills in Cambodia. The situation is particularly alarming in major cities such as Phnom Penh and Siem Reap. In Phnom Penh, around 3,000 tons of municipal waste is generated every day. More than 80 % of this waste consists of recyclable materials (e.g. organic 52%, plastic 21%) (see Phnom Penh Strategy Action Plan). However, present waste management practices focus mainly on collection and disposal. Private companies collect and dispose of waste at landfills without any sorting, recycling, or reuse. A minimal volume is collected informally by people who gather waste from both landfills and households and sell recovered valuables to intermediaries, usually destined for Thailand or Vietnam for further processing.

These informal garbage collectors face health risks as a result of being directly exposed to toxic substances and accidents on landfill sites. At the same time, the large amount of untreated waste exposes the general population to numerous risks such as water pollution, the spread of disease, odor nuisance and air pollution from burning garbage, not to mention contributing to GHG emissions.

Key objectives and main activities

In response to this waste management challenge, output 2 activities aim to introduce and mainstream "Circular Economy (CE)" as a solution to the problems of waste. The key goal of the output 2 activities is to test and promote viable CE options to ensure sustainable management of resources and waste. The project has sought to achieve this goal by implementing the following set of main activities: piloting new business approach for municipal and industrial waste (activity 2.1. and 2.2), strategic communication and awareness raising (activity 2.3), development of enabling policies and measures for CE (activity 2.4), and development of scaling-up strategies (activity 2.5).

Main activities and key progress to date

The main progress for each activity is listed below.

2.1. Piloting new business approaches for municipal waste

The project is designing a small-scale circular economy pilot scheme for Kep. This includes formulating a proposal for simple waste separation requirements (e.g. into organic and non-organic), designing adequate incentives in support of waste separation at source, and devising viable business models for waste depot investment as well as governance structure mechanism.

2.2. Designing a new business approach to industrial waste with the private sector

Two types of activities have been supported under this component.

One is to assess CE options for the garment sector, which is the largest industry in Cambodia, in response to their two major kinds of environmental challenges. They are heavy reliance on fuelwood as the main energy source for boilers and generation of a large volume of textile waste. The garment sector has been exploring options like a small-scale on-site Waste to Energy (WtE) solution and a large-scale WtE solution involving a cement kiln for co-processing waste. In partnership with the company H&M, the project assessed the environmental risks and benefits of the proposed CE options and provided recommendations for appropriate measures to maximize the CE benefits and minimize environmental and public hazards.

Another activity related to industrial waste is the development of a draft private sector engagement strategy developed by the UNDP Policy and Innovation unit. In support of this, the unit undertook rapid assessments of the major waste-generating and plastic-using industries with a view to identifying quick wins to be pursued by the private sector.

2.3. Strategic communication and awareness raising

In 2019, the project supported **the Special Taskforce on Plastic** established by the Ministry of Environment (MoE) and the National Council for Sustainable Development (NCSD). The Taskforce focuses on three priority areas: 1) Policy and regulation reviews on plastic, 2) Plastic waste communication and outreach, 3) Business development and support.

In line with the priorities set by the taskforce, the project developed a range of communication materials to raise awareness about problems with plastic waste and to promote the **4 Rs (Refuse, Reduce, Reuse, and Recycle) of plastic**.

For awareness raising and advocacy, the project 1) drafted a new guideline for the MoE and NCSD to internally implement 4 Rs, and 2) created posters, a booklet, and website contents for both MoE and UNDP, and social media messages to raise awareness about plastic problems and the urgency to implement 4 R actions among the general public.

Based on the government recommendation to actively engage and encourage younger generations to take actions for shaping a sustainable future, the campaigning activities primarily targeted the younger population.

The project, for instance, supported **a youth-led plastic-free campaign with the Royal University of Phnom Penh (RUPP)**. This campaign involved over 300 students and included a competition where students created videos to raise awareness and promote behavioural change.

To enable wider outreach, the project also conducted **joint campaigns against plastic waste with Cambodian celebrities**. The campaign entailed launching a cartoon video featuring a plastic monster, and two music videos and a TV commercial on the topic of plastic. The campaign also involved a three-day concert to raise awareness of plastic issues, which was held during the Water Festival. This campaign gained more than 10 million social media views. A TV commercial on 4Rs (Refuse, Reduce, Reuse, and Recycle) reached 1.3 million viewers.

Finally, in December 2019 the project organized **a national forum on plastic waste** which brought together more than 100 stakeholders (government, private sector, schools, development partner and NGOs) to share best practices and necessary actions.

2.4. Development of enabling policies and measures for circular economy

In order to identify viable CE options, the UNDP Policy and Innovation unit conducted various kinds of background research. They included 1) rapid review of single-use plastic regulations (plastic straws, Styrofoam) in countries across the world and creation of recommendations for Cambodia, and research on 2a) plastic waste recycling, 2b) organic waste recycling and 2c) Waste to Energy (WtE) options to identify the state of practice, existing barriers and opportunities for promoting CEs.

These research findings have been incorporated into a recommendation to the Plastic Taskforce for **single-use plastic regulations** (in draft) and **a Circular Economy Strategy and Action Plan** (in draft). The plan defines closure of the loop of the entire value chain (production, distribution, consumption, waste generation, and waste treatment) as a national goal. This will be accomplished by minimizing resource and energy input and waste, and by maximizing resource value. The plan also outlines a roadmap, including short-, medium-, and long-term priority actions to enable Cambodia's transition to a circular economy.

2.5. Development of scaling-up strategies including programming and new partnership

The project has formed strategic partnerships to advance CE dialogues with relevant institutions and initiatives, including existing UNDP projects such as Cambodia Climate Change Alliance, the World Bank (on plastic interventions), EU Switch Asia Programme (on sustainable consumption and production) and Global Green Growth Institute (GGGI) (on the Kep pilot). The UNDP Policy and Innovation unit has explored additional funding opportunities to complement and leverage the impacts of the BESD interventions, including:

- **The Embassy of Japan:** In March 2020, UNDP Cambodia submitted a proposal to the Embassy of Japan with the aim to support Cambodia in tackling plastic waste. This proposed project aims to provide technical assistance focusing on plastic waste, including regulations, business development for recycling, and awareness raising.
- **Alliance to End Plastic Waste (AEPW):** In January 2019, the AEPW was formed as a not-for-profit organization funded by over 45 companies to develop and implement solutions that will reduce the 8 million tons of plastic waste entering the oceans every year. In April 2020, UNDP Bangkok regional office signed a Memorandum of Understanding with AEPW, including Cambodia as one of 8 countries for their future support.
- **Co-impact System Change Grant:** In April 2020, UNDP Bangkok regional office (involving Cambodia, India, Viet Nam, The Philippines, Thailand) submitted a proposal for this grant. The proposed actions include waste segregation, changing consumer behaviour, establishing circular economy labs, training/upskilling workers for circular economy roles, advising national single-use plastics policies, engaging waste-picking communities, and supporting municipalities to design strategies for disposal of unrecyclable plastic to avoid leakage into the environment.

Priorities for January – June 2021 building on lessons learned

In 2019 and 2020, the project played a pivotal role in testing various approaches to promote CE options for municipal and industrial waste, and to advance policy and business dialogues that facilitate adoption of CE approaches applicable for Cambodia. Building on early results, and lessons learned as well as reflecting new emerging priorities, the following set of activities from January to June, 2021 are proposed to advance the transition towards a CE. Each activity includes a proposed list of institutions for activities.

1. Finalize a CE strategy and action plan and identify priority regulations for CE (NCSD, MoE)

The draft CE Strategy and Action Plan outlined priorities across the value chain (production, distribution, consumption, waste generation and treatment) to realize the transition towards a CE. Using the Plan as a guiding document, the project identifies priority regulations to be developed to promote key CE actions. The Plan will be disseminated to the sub national level and local authorities will be trained on its content and implementation. Drawing on other countries' lesson that the success of CE approach depends on the degree to which informal sectors participate in the model, the below interventions promote their active engagement for a CE wherever relevant.

2. Operationalise the CE model in Kep (NCSD, MoE, NCDD, Kep municipality)

The project support to the Kep model is pivotal in order to develop a model applicable for a small town with limited access to infrastructure and technology. The next priority is to operationalize the model by engaging stakeholders including the subnational government, private sector, and households. This begins with working with the major hotels and markets to sort waste for separate collection and treatment, and then later on with households. Given that most sellers in markets are women and household separation of waste is usually managed by women, the project will ensure their active participation in waste sorting and recycling, while helping to minimise their workload. The project may provide additional technical assistance for interested parties for on-site treatment of organic composting and quick measures to reduce plastic waste. The project will support recycling industries and social enterprises to be able to

treat sorted waste. The project will also identify and promote the role of informal waste pickers, who are excluded from the formal economy, in being part of the new model.

3. Ensure the environmental sustainability of Industrial Circular Economy solutions (NCSD MoE)

Some businesses in the industrial sector have promoted circular economy solutions as a means to reduce costs and mitigate environmental impact. One of these solutions is an on-site WtE facility to use textile waste as an alternative energy source to fuelwood. While this facility reduces reliance on fuelwood, it creates potential risks that burning textile leads to air pollution unless properly operated. The project will provide technical assistance to ensure the safe handling of these types of facilities, through the development of operating manuals and guidelines along with capacity building support for operators to mitigate any potential risks.

4. Promote the private sector engagement for a CE (NCSD, MoE, MoIH, ITC)

The private sector has a pivotal role in driving and scaling up business innovation in order to accelerate the shift from a linear towards a CE. The project will support:

- **The formation of CE private sector platform.** Building on a draft private sector engagement strategy, the project will design and create a platform to promote business led CE innovation and investments. A platform will be created to invite interested industries to join different CE tracks, to address specific challenges faced by different sectors such as manufacturing, wholesale and retail, food and beverage, and hospitality. A platform will provide information of quick and easy implementable CE measures for each sector and a list of available guidelines, technologies and companies which can provide solutions (e.g. composting, plastic and bottle recycling, alternatives). Companies with best practices may receive an award of recognition such as a Green Hotel Standard.
- **At least one short-term quick pilot initiative** will be supported in the priority areas of single-use plastic waste and recycling to generate valuable lessons in innovative private sector CE involvement. The project will explore a partnership with national universities such as ITC (Institute of Technology of Cambodia) to promote student led STEM innovation and train the next generation of CE Engineers including female students to build domestic capacities for promoting a CE and recycling. Lessons from pilot(s) will be used to upscale private sector CE innovations in terms of increasing the size of the innovation or widening its reach, in order to ensure that the entire country benefits from CE innovations.

5. Strengthen awareness raising and environmental education (NCSD, and MoE)

Improved knowledge is conducive to inducing behavioural change shifting towards a CE. A joint campaign with Cambodia celebrities enabled the project to achieve more than 10 million views. Information materials including posters were also instrumental in raising awareness among the targeted population including citizens, the civil society, academics, and the private sector. The project will continue to update and share information and raise awareness among relevant stakeholders, through various communication channels which may include government websites, newspapers, posters, media talk shows, rural campaigns, and social media. Furthermore, to ensure long term behavioural changes, the project will work with schools to develop and update appropriate environmental education materials to integrate environmental issues in school curriculums.

6. Strengthen partnership and programming (NCSD and MoE)

The project will continue to strengthen partnerships with relevant partners and mobilise resources to complement and leverage the impacts of the BESD interventions.

7. Share and disseminate best practices (NCSD and MoE)

The project will share key insights and lessons through its website, project briefs, domestic and international conferences and initiatives.

Output 3

Improved access to clean, affordable, and sustainable energy for all

Background: The widened gap between energy demand and supply in Cambodia

As of 2018, out of 16.5 million population⁹, 4.87 million¹⁰ do not access to grid electricity and are reliant on car batteries, wood, and other traditional fuels for energy¹¹.

There has been a rapid development in the installed capacity of **electricity generation** in Cambodia, from 584 MW in 2010 to 2,756 MW in 2019. Total power generation capacity in 2019 consists of, hydro of 1,330 MW (48%), thermal power (mainly coal) of 675 MW (24%), fuel oil-based generation of 227 MW (8%), renewable energy of 124 MW (4%), and captive power of 400 MW (15%) to meet power demand during dry season¹². The peak power demand is forecasted to be at 3,256 MW in 2030 according the "Energy Sector Assessment, Strategy, and Road Map" report of Asian Development Bank (ADB).

Despite of rapid power development, 1,037 villages remain without grid connection. The unelectrified villages are mostly located in highly vulnerable areas to climate change, e.g. remote islands of the Tonle Sap. As per Electricity Authority of Cambodia (EAC), these villages are not expected to get grid extension at least for another 5 years although the government aims to electrify all villages by 2021.

On the demand side, building sector was the highest final energy consumer in 2017 with an estimated share of about 52% equivalent to 3.5 Mtoe¹³. Residential and commercial buildings consumed 77% of total final energy in that year. According to national forecast, buildings energy consumption will be more than double until 2040. Since the year 2000, Cambodia's Ministry of Land Management, Urban Planning and Construction (MLMUPC) has approved 43,136 construction projects on a total land area of 114 million m². The estimated investment capital of these construction projects is more than US\$43 billion. At the end of first half of 2019, Phnom Penh office buildings space increased to 463,701 m², an annual increase of 23%. Post 2021, the Phnom Penh office building supply will comprise approximately 1,059,170 m², a 130% increase over the existing supply. This increase in building stock is posing a severe challenge to meet growing electricity demand. The government recognized that the booming constructions was one of the major causes for the sever power shortage during the dry season in 2019.¹⁴

To meet this ever-growing electricity demand, the power development plan (PDP) 2015 aimed for large hydro and thermal power mainly from coal and natural gas. Whereas country's commitments under Agenda 2030, and Paris Agreement, as well as increased vulnerability of national grid during dry season because of its heavy dependence on hydropower are forcing to revisit the plan. PDP 2020 is expected to ensure a more cohesive approach between policies and upgradation of electricity generation towards a greener path along with expanded transmission and distribution infrastructure to stimulate economic growth. On the demand side, the Ministry of Mines and Energy (MME) is currently updating the National Energy Efficiency Policy draft with the support of ADB, which is expected to be in place by first quarter of 2021.

⁹ Total population in 2018 is 16.25 million (sources include World Bank data)

¹⁰ Data from Cambodia's Voluntary National Review 2019 on the implementation of the 2030 Agenda for Sustainable Development https://www.kh.undp.org/content/cambodia/en/home/library/environment_energy/cambodia_s-voluntary-national-review-2019.html

¹¹ "Cambodia Energy Sector Assessment, Strategy, and Road Map" December 2018, available at <https://www.adb.org/sites/default/files/institutional-document/479941/cambodia-energy-assessment-road-map.pdf>

¹² https://eac.gov.kh/uploads/salient_feature/english/salient_feature_2019_en.pdf

¹³ Million Tonnes of Oil Equivalent

¹⁴ <https://asia.nikkei.com/Economy/Chinese-construction-rush-aggravates-Cambodia-s-electricity-shortage>

The building sector is one of the three sectors where the energy efficiency policy will be implemented. Driving the energy efficiency in building sector could lead to annual energy savings of up to 25% compared to the BAU¹⁵ scenario in 2035. In monetary terms, this is equivalent to annual cost savings of about US\$ 1.35 billion in 2035. Cumulatively, energy efficiency in buildings can avoid up to 17.3 million tonnes of carbon emissions until 2035 in Cambodia.¹⁶

Cambodia is one of the countries in the region with high cost of unit electricity. In 2015, unit average cost of electricity was about US\$ 0.20 per kWh, whereas in 2017, the price has fallen to about US\$ 0.12 per kWh. The government aims to reduce the energy cost for consumers by lowering the electricity tariff in the long run. Energy efficiency can also help to reduce electricity bill for residents and businesses. Furthermore, energy efficiency is one of the most cost-effective ways to enhance energy security, to boost competitiveness and welfare, and to reduce the environmental footprint of the energy system.¹⁷

The Ministry of Land Management, Urban Planning and Construction (MLMUPC) is currently developing technical building regulations. Integrating minimum energy performance in these technical regulations is highly recommended to reduce the energy demand growth. Building energy standards and regulations will not only accelerate the low-carbon development of Cambodia but also promote energy security and reduce the investments in new power supply infrastructure. These are important from political economy considerations. Developing a sustainable energy efficiency market also offers additional benefits for employment, poverty alleviation, health, competitiveness, and the environment.

It is therefore important to address both, supply and demand side challenges, while meeting increased energy demand.

Key objectives

In responding to this challenge, the objective of output 3 is to increase the share of renewable energy in the overall energy mix and provide affordable and reliable energy access to the vulnerable communities. Output 3 activities are aimed to attaining Cambodia's SDG 7 targets.

The project has sought to achieve this goal by implementing the following set of main activities under Building an Enabling Environment for Sustainable Development (BESD) project.

Main activities and key progress to date

The progress achieved by each of these activities is listed below.

Activity 3.1. Solar energy for improving energy access for rural communities

- Conducted site selection and technology comparison assessment for off-grid solar technologies including solar home systems (SHSs), direct current (DC) or alternating current (AC) minigrids, solar water pumping and other productive use applications for rural communities¹⁸. After evaluating various technology choices, the project selected implementation of DC micro grid as an innovative approach, which is flexible to meet the needs of the village including productive uses in the Steung Chrov Village of 141 households (HH) in Kampong Chhnang province. It was proposed to implement Okra's DC micro grid. About 30 HH have female as the head of the families and 10 households have people with disability or elders as the head of the families.
- The project is successfully testing viable solar business models to provide solar PV technologies to rural communities through Clean Energy and Incubation Program that was launched with seed

¹⁵ Business-As-Usual (BAU)

¹⁶ MME. (2017). National Energy Efficiency Policy 2018-2035 (Draft). Royal Government of Cambodia.

¹⁷ <https://www.iea.org/reports/world-energy-outlook-2019/energy-efficiency#abstract>

¹⁸ Refer to

https://seveaasso.sharepoint.com/:f:/s/SeveaOneDrive/EmCJIWkhp_5CgvNzWQVg2LwBkyK8nQ_gfILG8asOY9NQGA?e=S9WbgW

investment to 4 companies to secure first payment customer and consolidating business in securing investments.

Activity 3.2. Building technical capacity for solar PV technology installation, operation and maintenance

- The project developed SHS guideline, which was approved by the MME.
- Conducted training for 20 engineers/technicians on SHS design, installation and maintenance for off-grid solar energy during 6-7 February 2020.

Activity 3.3. Strategic communication and awareness raising

- Developed a leaflet on SHS as part of communication materials and is expected to be disseminated to the SHS suppliers, end-users for raising awareness on the key components of a SHS, basic operation and maintenance.

Activity 3.4. Development of enabling policies and measures for solar

- Evidence-based, economics of solar study is under progress that presents commercial assessment of costs and benefits, and how solar energy will boost the economic efficiency by diversifying Cambodia's sources of generation that informs decision making at policy level. This study will support policy and institutional planning on solar PV.

Activity 3.5. Development of scaling-up strategies including programming and new partnership

- Initial discussions with United for Efficiency (U4E) indicate a potential technical support from U4E to prepare energy efficiency guidelines and regulations for household appliances and equipment in Cambodia.
- Expanding energy access to the unserved communities remains a top priority of the government. The project team had identified Okra Solar (under activity 3.1) as an emerging partner to bring affordable and reliable energy to the villages that are not connected to the national grid.
- Having seen the potential for rooftop solar, UNDP invested its own resources to prepare a background briefing paper "Optimising Metering and Monitoring in Cambodia for New Tariffs" with the purpose to investigate how the electricity consumption of large customers is currently being metered, how the data is being handled, and the options available to large customers to access data on their own consumption. This paper provided some insights on the required preferential tariff for customers who installed a solar power system.

Priorities for January-June 2021 building on lessons learned

In 2019 and 2020, BESD project played a very important role in exploring off-grid solutions for vulnerable communities in rural areas, improve technical capacity through guidelines on SHS, and studied policy options to increase the share of renewables in electricity grid mix. Building on these early results, and lessons learned as well as reflecting new emerging priorities, the following set of activities are proposed for 2021 to promote clean energy as an engine of growth while recovering from COVID-19 and to advance the transition towards attaining Cambodia's SDG 7 targets.

Although energy efficiency was mentioned in the original Project Document of BESD project, this was not addressed during 2019 and 2020. UNDP invested its own resources in this potential emerging area through developing a project proposal for energy efficiency in residential and commercial buildings, as buildings are expected to consume about 70% of the total final energy and provides an opportunity to conserve scarce energy resources. Proposed energy efficiency interventions can be integrated into the ongoing BESD project activity 3.5, "Development of scaling-up strategies including programming and new partnership".

1. Affordable off-grid solar for productive applications in vulnerable communities

Building on the success of Okra business model during 2020 (activity 3.1), the project will work with regulators, Rural Electricity Enterprises (REE) and end-beneficiaries to promote solar DC micro grid as an option while providing electricity supply to the off-grid communities as a top government priority.

- Business model of solar DC micro grid shall be fine-tuned further to suit the energy demands of vulnerable communities while improving their livelihoods and living standards by closely working with local women's groups youth and children and their empowerment. Particular attention will be paid to the rights of socially marginalized groups such as women, persons with disabilities, youth and children using appropriate rights-based approaches. Affordability to pay for the electricity is a barrier considering high poverty rate in these communities. The project will work with financial institutions, REEs and Rural Electrification Fund (REF) to deliver a viable business model while expanding energy access. The women headed households and families with disabilities will be given a top priority while showcasing its implementation in off-grid villages.

2. Promote demand side energy efficiency to reduce peak load demand

- **Improve Energy Efficiency (EE) in buildings:** The objective is to improve energy utilization efficiency of buildings in Cambodia, particularly residential and commercial buildings through localized energy efficiency design guidelines, increased awareness, knowledge, and capacity on energy efficiency (EE) and energy conservation (EC) in buildings among buildings users and decision-makers of the construction sector. The National Council for Sustainable Development (NCSA) has initiated a project on guidelines and certification for green buildings in Cambodia (2019-2021). The aim of this project is to develop a national green building certification system in Cambodia, wherein EE is an important element of green buildings. Following activities are proposed to be implemented from January to June 2021.
 - a. Develop localized energy efficiency design guidelines for new residential and commercial buildings that are be used for Green Building Certification System under development by NCSA (EE design guidebook)
 - b. Pilot demonstration of energy efficiency solutions in one public building in coordination with NCSA Green Building Certification Project
 - c. Awareness raising on energy efficiency designs in public and private sector through promotional videos, factsheets, exhibition of in-country case studies, business talk (1)/ consultations (2)

Sustainability plan

In order to sustain and leverage the results achieved by the BESD project, UNDP Cambodia will deploy the following strategies, through two new projects: "global Sida-UNDP programme" and "combatting marine plastic litter" funded by Japan. Both are scheduled to commence in January 2021. This will allow overlaps between the BESD and these initiatives during the period between January and June 2021 to transfer project knowledge and results to be taken up by the new projects.

Global Sida-UNDP programme (January, 2021-Dec 2023)

For the output 1 and output 3 activities, UNDP Cambodia will ensure sustainability and scaling up of the results achieved by the BESD project, through the global Sida-UNDP programme.

The main aim of this programme is to strengthen UNDP capacities to achieve its overall Sustainable Development vision for poverty eradication through a more integrated, coherent approach to the environmental and climate dimensions of its Strategic Plan. Cambodia is included as one of pilot countries under this programme.

This programme will be implemented for three years from January 2021 to December 2023, administrated by the UNDP headquarter. Under this programme, UNDP Cambodia plans to engage one SB5 level national officer for biodiversity/PES and one SB4 level national officer for energy. They will serve to build the bridge and synergy between the BESD project and the Global Sida project and other related initiatives to sustain and take up key priorities for future actions.

- **Key roles of SB5 national officer (biodiversity and PES) linked to output 1:** The SB5 national officer is to sustain and leverage the output related results achieved by the BESD project with the specific objective to operationalize the PES policy and institutional framework and to implement the proposed key actions. The staff will also ensure an integrated and coherent approach across environmental projects related to sustainable financing options proposed by the BESD project.
- **Key roles of SB4 national officer (Energy) linked to output 3:** The SB4 national officer is to ensure continued efforts to mainstream solar energy as an affordable, reliable and clean energy for rural households and agriculture. Another key role is to improve and expand ongoing work on energy efficiency in residential and commercial buildings considering that buildings are expected to consume a major share of the total final energy. This person will coordinate activities, including technical support, among the projects that promote sustainable energy and energy efficiency. Also acts as a liaison officer to facilitate knowledge sharing and to enable replication and scaling up of workable models e.g. solar based DC micro-grids.

Combatting Marine plastic litter project funded by Japan (January 2021 to June, 2023)

For the output 2 activities, UNDP Cambodia will ensure the sustainability and scaling up of results built by the BESD project through a new project funded by Japan. This project will build on earlier efforts supported by the BESD project to reduce plastic waste in Cambodia. In alignment with the priority actions supported under the BESD project and identified by a draft National Circular Economy Policy and Action Plan, this new project aims to further develop new regulations on single-use plastic, to raise awareness to promote 4Rs (Refuse, Reduce, Reuse and Recycle) of plastic, and to promote business innovations for plastic recycling and waste to energy interventions.

Annex 1: Updated Integrated Result Framework (BESD and Tree Planting) (2019-2021)

<p>Intended Outcome as stated in the UNDAF/Country Programme Results and Resource Framework: UNDAF Outcome 3: By 2023, women and men in Cambodia, in particular the marginalized and vulnerable, live in a safer, healthier, more secure and ecologically balanced environment with improved livelihoods, and are resilient to natural and climate change related trends and shocks.</p>
<p>Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: 3.2.3: <i>The extent to which natural resources are protected, conserved and sustainably managed as measured in: (i) Percentage of forest cover; (ii) Percentage of protected area</i> (i) Baseline (2016): 48.14% Target (2023): TBD; (ii) Baseline (2018): 41% Target (2023): TBD 3.3.1: <i>Number of multi-sectoral policies, legislation, plans and strategies relevant to sustainable production and living, which are developed/updated</i> Baseline (2018): 7 Target (2023): 15</p>
<p>Applicable Output(s) from 2018-21 Strategic Plan: Output 1.4.1: <i>Solutions scaled up for sustainable management of natural resources including sustainable commodities and green and inclusive value chain</i> Indicator: <i>Natural resources that are managed under a sustainable use, conservation, access and benefit sharing regime: a) Area under sustainable forest management (hectares)</i> Baseline (2017): 776.046 ha (under CF and CPAs); Target (2020): 1 million ha Output 1.5.1: <i>Solutions adopted to achieve universal access to clean, affordable and sustainable energy</i> Indicator <i>Number and proportions of households benefiting from clean, affordable and sustainable energy access disaggregated by a) women-headed, b) in rural areas, c) in urban and peri urban areas</i> Baseline (2017): 0; Target (2020): a) 50 HH, b) 200 HH, c) NA.</p>
<p>Project title: Towards Environmental Sustainability and Atlas Project Number: 00085640 Revised title by the 1st Board Meeting: Building an Enabling Environment for Sustainable Development (BESD) in Cambodia</p>

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
Output 1 CBNRM institutions strengthened and financial resources mobilised for sustainable NRM	<p>1.1. Extent to which CBNRM institutions are strengthened</p> <p>Measured on a three-point scale: 1= Some extent: Initial fund collection and distribution mechanism agreed 2= Moderate extent: PES operational mechanisms (including fund collection & management, implementation strategies and arrangements, and monitoring system) designed 3=Great extent: PES operational mechanisms implemented</p>	Project report (annual and quarterly report)	0	2018		1	2	Reviews of pilot documents and field monitoring, meeting minutes
	<p>1.2. Number of total and female headed households benefit from CBNRM</p>	Project report (annual and quarterly report)	0	2018		30	50	Reviews of pilot documents and field monitoring

¹⁹ Targets are cumulative. Targets in 2021 and 2022 are subject to funding availability. The targets in 2021 are aimed to complete by June.

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
	<p>1.3. Extent to which pilot PES approaches are operationalised for Kulen Mountain</p> <p>Measured on a three-point scale: 1= Some extent: Initial fund collection and distribution mechanism agreed 2= Moderate extent: PES operational mechanisms (including fund collection & management, implementation strategies and arrangements, and monitoring system) designed 3=Great extent: PES operational mechanisms implemented</p>	- Project report (annual and quarterly report)	NA	2018	1	2	3	Reviews of documents
	<p>1.4. Extent to which pilot PES approaches are operationalised for Kbal Chay</p> <p>Measured on a three-point scale: 1= Some extent: Initial fund collection and distribution mechanism agreed 2= Moderate extent: PES operational mechanisms (including fund collection & management, implementation strategies and arrangements, and monitoring system) designed 3=Great extent: PES operational mechanisms implemented</p>	- Project report (annual and quarterly report)	0	2018	1	2	3	Reviews of documents
	<p>1.5. Extent to which a national PES policy is developed</p> <p>Measured on a three-point scale: 0= None: No initial drafts 1= Moderate extent: Initial assessment and analysis 2= Great extent: final draft of policy ready for endorsement</p>	- Project report (annual and quarterly report) - Policy measures	0	2018	0	1	2	Reviews of documents, meeting minutes

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
	<p>1.6. Extent to which gender concerns are integrated into the proposed policy measures</p> <p>Measured on a three-point scale: 1= Some extent: relevant policy documents refer to their possible impacts on men and women 2= Moderate extent: relevant policy documents refer to their possible impacts on men and women and include some measures to ensure positive impacts 3=Great extent: relevant policy documents include full measures and budget to ensure positive impacts</p>	- Project report (annual and quarterly report) Policy measures	0	2018	1	2	2	Reviews of documents
	<p>1.7. Volume of financial resources mobilized to support proposed measures, measured in USD</p>	- Project report (annual and quarterly report)	0	2018	0	0	100k	Reviews of documents,
	<p>1.8 Number of people with improved awareness on benefits of biodiversity and PES approach</p> <p>Measured by the number of people outreached by communication materials</p>	-Project progress report -Communication materials such as posters, policy briefs, case studies and social media posts related to PES in Kulen and Kbal Chhay -Video clips on PES	4	2019	NA	NA	300	-Review progress report and communication materials (make available on Cleaning House Mechanism website)
Tree-planting as covid-19 response and income generation to rural population	<p>Activity 1.9: Tree planting</p> <p>1.9.1 Number of families being enrolled in income generating activities such as tree-planting, maintenance of forest plantation and nursery development (activity 1.8)</p>	- Project report (annual and quarterly report)	0	2020	NA	1600	0	Reports from partners
	<p>1.9.2 Number of Hectares new tree-plantation and number of Ha maintained</p>	- Project report (annual and quarterly report)	0	2020	NA	80	160	Reports from partners
	<p>1.9.3 Dollars paid out as cash compensation for work under activity 1.8</p>	- Project report (annual and quarterly report)	0	2020	NA	USD100,000	USD210,000	Reports from partners

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
Output 2 Waste reduced, recycled and reused through application of circular economy models	2.1. Extent to which a pilot is designed and implemented (municipality) Measured on a three-point scale: 0= None extent: Pilot is not designed 1= Moderate extent: Business model for pilot is designed, proposed, and consulted on with stakeholders 2=Great extent: Pilot is designed and implemented, with a business model tested and resulting data collected	- Project report (annual and quarterly report)	0	2018	0	1	2	Document reviews Field monitoring
	2.2. Extent to which a circular economy pilot is designed and implemented (industry) Measured on a three-point scale: 0= None extent: Pilot is not designed 1= Moderate extent: Business model for pilot is designed, proposed, and consulted on with stakeholders 2=Great extent: Pilot is designed and implemented, with a business model tested and resulting data collected	- Project report (annual and quarterly report)	0	2018	0	1	1	Document reviews Field monitoring
	2.3. Number of people outreached for raising awareness on appropriate waste management Measured by number	- Project progress reports	0	2018	200	400	600	Document reviews
	2.4. Extent to which enabling policy measures are developed for the support of circular economy Measured on a three-point scale: 0= None: 1= Moderate extent: an initial set of policy measures are proposed 2= Great extent: agreed set of measures receive government endorsement	- Project report (annual and quarterly report) - Policy measures	0	2018	0	1	2	Document reviews

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
	2.5. Extent to which a private sector engagement strategy is designed and implemented Measured on a three-point scale: 0= none 1= Moderate extent: Strategy is designed but not implemented 2= Great extent: Strategy is operationalized including an online platform and pilot initiative	- Project report (annual and quarterly report) - Policy measures	0	2020	0	1	2	Document Reviews
	2.6. Volume of financial resources mobilised to support proposed waste management measures, measured in USD	- Project report (annual and quarterly report)	0	2018	0	500K	500K	Document reviews Field monitoring
Output 3 Improved access to clean, affordable and sustainable energy for rural communities	3.1 Solar PV energy business models developed and rolled out to provide electricity, incl. for productive use Measured by number of business models	Project report (annual and quarterly report)	0	2018	0	2	2	Reviews of documents Field monitoring
	3.2 Number of rural households benefit from solar PV system installed for access to energy incl. for productive use Measured by number households (male and female headed)	Project report (annual and quarterly report)	0	2018	0	100	150	Reviews of documents, meeting minutes
	3.3 Number of female headed households benefit from solar PV system installed for access to energy, water and productive use Measured by number of households (female headed only)	Project report (annual and quarterly report)	0	2018	0	25	50	Reviews of documents, meeting minutes
	3.4 Number of technicians with enhanced capacities to design, install and maintain solar PV as per installation standards/guidelines (to be prepared) Measured by number of male and female technicians	Project report (annual and quarterly report)	0	2018	0	20	50	Reviews of documents, meeting minutes
	3.5 Number of community members with improved awareness on benefits of solar and appropriate use of solar technologies	- Project report (annual and quarterly report)	0	2018	0	40	60	Reviews of documents, meeting minutes

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS ¹⁹			DATA COLLECTION METHODS
			Value	Year	2019	2020	2021 (Jan-June)	
	Measured by number of community members							
	3.6 Number of National quality standards/guidelines for solar PV technologies developed	- Project report (annual and quarterly report) - Policy measures	0	2018	0	1	1	Reviews of documents
	Measured by national quality standards/guidelines							
	3.7 Localized energy efficiency design guidelines developed (Yes/No)	- Project report (annual and quarterly report)	0	2020	NA	NA	Yes	Reviews of documents, meeting minutes
	3.8: Extent to which EE solutions in public buildings are designed and implemented	- Project report (annual and quarterly report)	0	2020	NA	NA	1	Reviews of documents, meeting minutes
	Measured on a three-point scale: 0= None extent: No solutions designed 1= Full extent: EE solutions designed, proposed, and implemented							
	3.9 Number of people with improved awareness on energy efficiency	- Project report (annual and quarterly report)		2020	NA	NA		Reviews of documents, meeting minutes
	Measured by the number of people outreached by communication materials							
	a. 2 Videos		a. 0				a. 500	
	b. 1 Factsheets		b. 0				b. 500	
	c. 1exhibition		c. 0				c. 50	
	d. 1 business talk		d. 0				d. 50	
	e. 2 consultative workshops		e. 0				e. 100	

Annex 2: Proposed budget for 2021 (January to June)

Activities		Total budget (USD)	Q1	Q2
Output 1:	CBNRM institutions strengthened and financial resources mobilized for sustainable NRM			
Activity 1.1	Expansion and strengthening of CBNRM	68,242.00	X	X
Activity 1.2	Operationalization of payment for Ecosystem Services	65,252.00	X	X
Activity 1.3	Development of strategic Communication strategy and information materials	2,036.00	X	X
Activity 1.4	Development of scaling-up strategies including programming and new partnership	2,036.00	X	X
Activity 1.5	Monitoring and Evaluation	4,000.00	X	X
	GMS	11,325.28		
	Total output 1	152,891.28		
Output 2:	Waste reduced, recycled and reused through the application of circular economy model.			
Activity 2.1	Circular economy pilot: Municipality 1)- Kep by NCD DS and 2)- Industrial pilot	104,368.00	X	X
Activity 2.2	Circular economy pilot: Industrial level	19,288.00	X	X
Activity 2.3	Development of strategic Communication strategy and information materials	9,200.00	X	X
Activity 2.4	Development of enabling policies and measures	11,716.00	X	X
Activity 2.5	Development of signed-up strategies including programming and new partnership	30,216.00	X	X

Activity 2.6	Monitoring and Evaluation	3,000.00	X	X
	GMS	14,223.04		
	Total output 2	192,011.04		
Output 3:	Improved access to clean, affordable, and sustainable energy for the rural poor			
Activity 3.1	Solar energy for electricity supply and increasing resilience of rural communities	20,690.00	X	X
Activity 3.2	Building technical capacity for installation of solar, and their maintenance	18,190.00	X	X
Activity 3.3	Strategic communication and awareness raising	48,140.00	X	X
Activity 3.4	Development of enabling policies and measures	77,095.00	X	X
Activity 3.5	Development of scaling-up strategies including programming and new partnership	30,595.00	X	X
Activity 3.6	Monitoring and Evaluation	3,000.00	X	X
	GMS	15,816.80		
	Total output 3	213,526.80		
PMC	Project Management Cost			
	Staff cost, Local consultant under NCSD	36,890.00	X	X
	Office supplies, bank charge, communication, materials and goods, vehicle maintenance (NCSD)	4,120.00	X	X
	Salary cost, Local consultant for communication, DPC cost sharing (UNDP)	36,970.00	X	X
	Office supplies, bank charge, communication, IT equipment, office cost sharing (UNDP)	3,480.00	X	X
	Meetings, Travel (UNDP)	3,327.86	X	X

	GMS	6,783.03	X	X
	Total PMC	91,570.88		
	Grand total	650,000.00		

Budget summary by responsible parties

Responsible parties	Amount
NCSD (Including all grants under NCSD)	250,680.00
GDLC/MOE	42,000.00
GDEP/MOE	40,000.00
DBD/NCSD	58,000.00
DGE/NCSD	50,680.00
NCDDS	20,100.00
MME	30,950.00
UNDP	348,270.00
Total	650,000.00

Please refer to the attached excel file for the detailed annual work and budget plan.

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FINAL PROJECT REPORT

Reporting Period:
01 January 2019 – 30 June 2021

ProDoc Project name	Towards Environmental Sustainability in Cambodia
Project Name	Building an Enabling Environment for Sustainable Development (BESD)
Project ID:	00093203
Award ID:	0085640
Duration:	01 January 2019-30 June 2021
Component (Strategic Plan):	Solutions scaled up for sustainable management of natural resources, including sustainable commodities and green and inclusive value chains
Total Budget	US\$ 3,221,078.84
Implementing Partners/Responsible parties	National Council for Sustainable Development, Ministry of Environment, Ministry of Mine and Energy, National Committee for Sub-National Democratic Development

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Acronyms

ADB	Asian Development Bank
CBNRM	Community Based Natural Resource Management
EAC	Electricity Authority of Cambodia
EDC	Electricité Du Cambodge
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GDEP	General Directorate of Environmental Education
GDLC	General Directorate of Local Community
GDANCP	General Department of Administration for Nature Conservation and Protection, MoE
GEF	Global Environment Facility
GHG	Greenhouse Gas
GSSD	General Secretariat for Sustainable Development
INRM	Integrated Natural Resources Management
MEF	Ministry of Economy and Finance
MME	Ministry of Mines and Energy (formerly MIME)
MoC	Ministry of Commerce
MoIH	Ministry of Industry and Handicraft
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MoI	Ministry of Interior
MoT	Ministry of Tourism
MoWRAM	Ministry of Water Resources and Meteorology
NCDDS	National Committee for Sub-National Democratic Development
NCSD	National Council for Sustainable Development
NGO	Non-Governmental Organisation
NPASMP	National Protected Areas Strategic Management Plan
NRM	Natural Resource Management
PA	Protected Area
PDOE	Provincial Department of Environment
PES	Payment for Ecosystem Services
PPA	Power purchasing agreement
PPP	Public Private Partnership
PV	Photovoltaics
RGC	Royal Government of Cambodia
RUPP	Royal University of Phnom Penh
SDG	Sustainable Development Goal
SHS	Solar Home System
SME	Small and Medium Enterprise
SIDA	Swedish International Development Cooperation Agency
SREP	Scaling-up Renewable Energy for Low Income Countries Programme
SWM	Sustainable Waste Management
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD Programme
USAID	United States Agency for International Development
WB	World Bank

Executive summary

The Building an Enabling Environment for Sustainable Development (BESD) project was designed to address three sets of environmental challenges, which emerged due to the country's rapid economic and population growth. The problems to be addressed were 1) degradation of natural resources; 2) growing volume of waste; and 3) limited access to affordable, sustainable, and clean energy among the poor. To achieve this objective, the project designed and tested *innovative* environmentally sustainable models in the targeted areas through public and private partnerships, with a view to attaining the following three outputs:

- **Output 1 (Natural Resources Management):** CBNRM institutions strengthened, and financial resources mobilised for sustainable NRM
- **Output 2 (Circular Economy):** Waste reduced, recycled and reused through application of circular economy models
- **Output 3 (Energy):** Improved access to clean, affordable, and sustainable energy for the rural poor

Overall, the project served as a “pioneer” initiative that introduced numerous new concepts and innovative solutions to Cambodia. The project demonstrated the tangible environmental and economic benefits of these new concepts and innovative solutions, which the project had furthermore sought to mainstream for the target stakeholders as explained below.

Output 1: Natural Resource Management

The project sought to 1) strengthen the role of local communities in managing natural resources and ecosystem services and 2) mobilize sustainable financing of PAs through PES.

To strengthen the role of local communities in managing PAs, the project provided trainings for communities and their networks. The project also supported the boundary demarcation of the Community Protected Area to strengthen their tenure rights of natural resources and provided alternative livelihood options to alleviate the pressure on the protected area.

The project provided an additional rapid Covid-19 response fund, to engage 2,810 affected people in Pursat and Siem Reap provinces in tree planting as part of a cash for work programme. At least US\$ 196,084 was paid to the affected communities, including 513 women-headed households. A total of 147,800 seedlings were planted, covering a total area of 181.93 ha.

The project also played an important role in building an enabling environment for PES to mobilise sustainable financing for PA management. This was done by awareness raising of the PES concept, by designing schemes for two PES pilot sites, and by developing a draft national PES roadmap (2021-2031), which defined an overall vision, priority actions, and a plan for upscaling PES pilots to the national level.

Output 2: Circular Economy (CE)

The project sought to introduce and mainstream “Circular Economy (CE)” as a solution to the problems of waste management with a particular focus on plastic waste. Since the concept of CE was new to the country, to successfully initiate a transition towards a CE and to effective plastic management, the project implemented an integrated approach.

The project started with a series of research initiatives aiming to identify barriers and opportunities for CE. Drawing on the research findings, the project supported the MoE and NCSD in developing an enabling policy and regulatory framework for relevant stakeholders. This resulted in the National CE Strategy and Action Plan (2021-2035) and a draft sub-decree on plastic management.

The project also promoted awareness raising through dissemination of information materials and through a plastic-free campaign conducted in partnership with two universities and Cambodian celebrities. This campaign had more than 10 million social media views.

In addition, the project promoted active engagement of the private sector with a view to adopting CE measures. The project developed a CE Private Sector Platform to disseminate information about those measures. In partnership with H&M, the project also assessed Waste to Energy options for the garment sector, the largest industry in Cambodia. This joint assessment was used to recommend appropriate Waste to Energy measures to minimize environmental hazards.

With the aim to develop a CE model applicable to smaller towns, the project supported CE pilot activities in Kep province. This included formulating a proposal for simple waste separation, designing adequate incentives in support of waste separation at source, and devising viable business models for waste depot investment and governance structure mechanisms. The project also provided equipment such as waste bins and depots.

Output 3: Energy

The project sought to mainstream solar energy as a clean, sustainable, affordable and reliable energy for off-grid vulnerable communities and to promote energy efficiency as one of the most cost-effective ways to meet the growing electricity demand.

The project played an important role in demonstrating the viability of solar PV- especially its comparative advantages for providing affordable energy to off-grid rural poor households. In order to convince high-level decision-makers about the potentials and benefits of solar PV, the project provided solid scientific and economic evidence through the 1) De-risking Renewable Energy Investment study and the 2) "Economics of Solar" study. The project also disseminated various communication materials to improve the understanding of solar. The project further tested and showcased the viability of solar through the Clean Energy and Incubation Program and via solar PV mini-grids to off-grid communities in Kampong Chhnang and Ratanakiri provinces. A total of 225 households gained access to electricity.

During the last 6 months, the project promoted energy efficiency initiatives aimed at the highly energy-intensive building sector, through the development of the Energy Efficiency Design Guideline for Residential and Commercial Buildings, installation of energy efficiency measures at the General Department of Energy, and development of awareness raising materials.

Lessons learned

The project played a crucial role in building an enabling regulatory and policy framework and in testing, piloting, and demonstrating the environmental and economic aims, purposes, and benefits of these new concepts. This was in part due to assignments of senior level technical experts from both the government and UNDP who provided timely, high-quality technical assistance. Another key reason is the adaptive management, which enabled the project to effectively respond to challenges faced by the outbreak of COVID-19.

Despite these measures, the difficulty in conducting field missions due to Covid-19 affected the operationalisation of policy designs that depended on results from pilots. Also, the project had many ambitious goals, which meant that project stakeholders had to prioritize their engagements over others. Furthermore, the diversity of project components (NRM, CE and energy) made integration challenging.

This offers some important lessons for future projects. It is imperative to design projects with a realistic set of activities in consideration of project resource and project duration. Second, future projects must focus on ways to ensure an integrated approach across components.

I. Context

Whereas Cambodia has attained impressive economic growth over the last 20 years, it faces a new set of developmental challenges regarding its environment. These include 1) degradation of natural resources; 2) growing volume of waste, and 3) limited access to affordable, sustainable and clean energy among the poor.

To address these environmental challenges, the BESD project sought to strategically position Cambodia's path towards achieving the Sustainable Development Goals (SDGs) related to 1) *Natural Resources Management (NRM)*; 2) *Circular Economy (CE)*; and 3) *clean, affordable and sustainable energy*.

To achieve this objective, the project designed and tested *innovative* environmentally sustainable models in the targeted areas through public and private partnerships. The project sought to attain the following three outputs:

- **Output 1 (NRM):** CBNRM institutions strengthened, and financial resources mobilised for sustainable NRM
- **Output 2 (CE):** Waste reduced, recycled and reused through application of circular economy models
- **Output 3 (Energy):** Improved access to clean, affordable, and sustainable energy for the rural poor

The project sought to make contributions to the UNDAF, 2019-2023 Outcome 3– “Planet: By 2023, women and men in Cambodia, in particular the marginalized and vulnerable, live in a safer, healthier, more secure and ecologically balanced environment with improved livelihoods, and are resilient to natural and climate change related trends and shocks.”

The project results also sought to contribute to the attainment of the following outputs of the UNDP County Programme Document (CPD 2019-2023)

- Output 2.1: “Targeted cities and urban centres prepare and operationalize solid waste management plan to reduce environmental pollution impact from solid waste” and
- Output 2.3: “Rules and regulations formulated and adopted for forest/natural resource management and market solutions developed for conservation and renewable energy.”

Targeted provinces for pilot and demonstration activities included Siem Reap and Preah Sihanouk (for PES), Pursat and Siem Reap (for cash for work programme), Kep (for circular economy), and Kampong Chhnang and Ratanakiri (for energy).

Target stakeholders included Civil society organizations, the private sector, academic institutions, local communities, indigenous peoples and women, with particular attention to the rights of socially marginalized groups.

II. Performance review

Progress review

1. Overall progress towards the UNDAF outcome

The project made tangible contributions to the UNDAF, 2019-2023 Outcome 3– “Planet: By 2023, women and men in Cambodia, in particular the marginalized and vulnerable, live in a safer, healthier, more secure and ecologically balanced environment with improved livelihoods, and are resilient to natural and climate change related trends and shocks.”

NRM project activities aimed to improve the livelihoods and resilience of rural communities in targeted areas. There was a particular focus on strengthening the skills, rights and networks of people involved in managing Phnom Kulen National Park. The project also engaged a total of Covid-19 affected 2,810 people through a cash for work programme for planting trees with the aim to restore over 181 hectares of degraded lands in protected areas. The project further developed a national PES roadmap as an enabling policy framework to mobilise sustainable financing for protected areas. Project activities related to circular economy sought to support a clean and environmentally sustainable environment via policy and regulatory measures to reduce, reuse, and recycle plastic waste. Project activities related to energy sought to provide a clean, affordable and sustainable energy to 225 off-grid rural poor households that previously lacked such access (See the section III project results summary for more information).

2. Overall progress towards the CPD output(s) relating to your project

The project results also contributed to the attainment of the following outputs of the UNDP County Programme Document (CPD 2019-2023)

- Output 2.1: “Targeted cities and urban centres prepare and operationalize solid waste management plan to reduce environmental pollution impact from solid waste” and
- Output 2.3: “Rules and regulations formulated and adopted for forest/natural resource management and market solutions developed for conservation and renewable energy.”

For output 2.1, the project supported the Kep administration to draft and update their solid waste management plan, which will be used to enable waste separation at source and recycling. For output 2.3, the project formulated new policy and regulatory measures for effective management of natural resources, waste and energy. These included a national PES roadmap, CE Strategy and Action Plan, a draft sub-decree on plastic management, and Energy Efficiency guidelines for commercial and residential buildings (See the section III for details for how these policies and regulations will be used).

3. Capacity development

The project contributed to improved national-level capacity through building an enabling policy and regulatory framework for attaining sustainable development in the target areas. For instance, the project developed a national roadmap for PES as a sustainable financing option for managing protected areas. For waste management, the project developed a national CE Strategy and Action Plan. Like the PES roadmap, this strategy set the overall vision and priority activities for the country to transition from a linear to a circular economy. Project activities related to energy played a pivotal role because they provided robust evidence on the comparative advantages of solar energy and opened for mainstreaming.

In all of these activities, both senior and technical level government officers took active roles in design and implementation. This contributed to the enhancement of their overall capacities in terms of technical knowledge, coordination skills, and the ability to steer relevant policies, regulations and plans to next steps.

Through the project implementation, they acquired high level of technical knowledge related to NRM, CE and Energy. For instance, the NCSD/MoE and line ministries learned about new concepts and benefits of PES and CE. The project also helped the Ministry of Environment (MoE) technical officers to identify possible environmental impacts of waste to energy measures and develop a guideline to minimize such impacts. It also helped the Ministry of Mine and Energy (MME) technical officers to learn about the new technology of solar mini-grids that enable energy provision for off-grid households.

Moreover, the project ensured the active roles of the government officers in coordinating and navigating discussions on and implementation of relevant policies and regulations. This, for instance, resulted in the successful development of enabling policy and regulatory frameworks such as national PES roadmap, policy recommendations for PES fund management, and the successful endorsement of the national CE Strategy and Action plan.

4. Gender marker

According to the BESD result framework, the project was listed as gender-marker 2 (gender equality is not the main objective of the expected output, but output promotes gender equality in a significant and consistent way).

The project design incorporated measures to support equal opportunities for women to participate in the activities. For instance, the project results framework disaggregated numbers by gender to monitor and evaluate equal participation in project interventions. While the project sought to promote gender equality by ensuring the equal participation of both women and men in decision making and implementation for all the activities, the terminal evaluation report highlighted the need for additional actions to achieve more fundamental changes. The recommended actions included a gender-gap assessment, a plan of action for interventions, and additional focus on tracking the extent to which the gender gap is narrowing.

5. Impact on direct and indirect beneficiaries

In light of the primary goal to create an enabling environment for sustainable development, a majority of project activities centered upon developing enabling frameworks (e.g., national PES roadmap, national CE Strategy and Action Plan, and development of Energy Efficiency guidelines for buildings). Through these activities, beneficiaries such as citizens, local communities and the private sector indirectly benefited from an improved environment for sustainable NRM, circular economy, and sustainable energy.

The project also had specific outreach components for beneficiaries on the ground. They included activities to strengthen the tenure rights of local communities living in the national park of Phnom Kulen in Siem Reap province, through the placing over 100 boundary posts to protect community protected areas and a 900 ha of watershed of Klah Khmum village. From mid-2020 to May 2021, the project provided rapid Covid-19 response funds to support income-generation opportunities through tree-planting for residents in select areas of Siem Reap and Pursat, who were among the most affected by Covid-19. A total of 2,810 people from 1,915 families joined tree planting activities and received US\$196,084 in total. The project also provided solar energy through solar mini grids to off-grid rural poor households who previously had no access to energy. As a result, a total of 225 households gained access to electricity. This included 140 households with 1245 people in three villages in Kampong Chhnang province, and 85 households with 341 people from a Jarai indigenous village in Ratanakiri province.

Implementation strategy review

1. Participatory/consultative processes

At the design stage, the project assessed challenges and opportunities in NRM, waste and energy. Based on the assessment, the project identified areas for priority interventions together with the Ministry of Environment (MoE), National Council for Sustainable Development (NCSD) and the Ministry of Mines and Energy (MME). To attain the project overall objective to “build an enabling environment for sustainable development” in target areas of work, the project supported 1) research, 2) testing innovative approaches on the ground, 3) development of enabling policies and regulatory instruments, and 4) raising awareness about new approaches.

For all the activities, “meaningful stakeholder consultation and participation” was promoted as a key guiding principle. For PES work, for instance, the project organized a National Dialogue on PES, which brought together 160 people to share the state of knowledge related to PES and collectively define priorities for PES in Cambodia. For CE works, the project engaged relevant line ministries, the private sector, development partners, and civil societies for consultation meetings on proposed objectives and priorities in order to effectively incorporate their views.

In addition to engaging stakeholders in consultations and policy discussions, the project sought to ensure that nobody would be left behind during field level pilot activities. The project paid special attention to the most vulnerable, such as the poor, women, and people with disabilities. For example, the cash for work programme applied measures to identify potential households and to ensure equal participation of both women and men in joining and benefiting from the income generation opportunities. At least US\$ 196,084 was paid to the affected communities, including 513 women-headed households. The solar mini-grids work conducted rapid assessment to identify 30 female headed households and 10 households with disability or elders to be included among the beneficiaries.

2. Quality of partnerships

The project engaged various partners for the project implementation.

On the government side, the project engaged all relevant line ministries and subnational administrations in defining policy priorities and implementing pilot activities related to NRM, circular economy and energy. The project also coordinated with other UN agencies, donors, NGOs and civil society. For the work on PES, the project jointly organized the National Dialogue on PES with the Food and Agriculture Organization (FAO). For the pilot implementation, the project worked closely with the NGO Archaeology & Development Foundation (ADF), which had existing networks and activities in Kulen Mountain, to ensure effective implementation of the activities. Under the CE related activities, the project further coordinated a series of CE learning sessions, which invited partners including development partners, NGOs and research institutions to share the state of knowledge related to waste management. The project also mobilized youth groups through engagement with the Royal University of Phnom Penh and the National University of Management in youth-led plastics campaigns on social media.

In addition, the project promoted active engagement of the private sector to initiate and advance the shift towards a circular economy. The project designed and launched a CE private sector platform to disseminate information about priority CE measures, which can be adopted for different types of businesses. A handbook on how to transform hotel businesses to be environmentally sustainable was also produced.

3. National ownership

According to the final project evaluation report, the overall quality of implementation by both Implementing Partner and UNDP was “highly satisfactory”. The report describes national ownership as “evident,” noting the keen interest and engagement of senior level government and officials in implementation of project activities. Please also refer to the section: *progress review, 3. capacity development* for the information about how the government partners took a lead in designing and implementing key project activities.

In terms of involvement of national counterparts in project activities, the project followed the National Implementation Modality (NIM) with the National Council for Sustainable Development (NCSd) as the project Implementing Partner (IP). The NCSd has led the processes of design and implementation of project activities. The Project Management Unit (PMU) under the NCSd played a central role in preparing and updating annual work plans, organizing project-related meetings, including the board meetings, and managing day-to-day operations of the activities. These activities were supported by the UNDP project manager and technical experts on NRM, circular economy and energy, as well as a group of national and international consultants. Project implementation and quality was monitored by the UNDP country office.

To ensure effective implementation of the project activities, the NCSd also provided the project with co-financing of US\$160,800 as in-kind contribution. Senior management of the NCSd took an active role in providing overall guidance on project directions and activities.

4. Sustainability

To ensure the sustainability of project results, several strategies were deployed, focusing on creating an enabling environment and on developing capacities.

The first strategy was to build upon existing government interests and needs. The project sought to address the government interests in creating an enabling environment in support of sustainable development approaches in the areas of NRM, waste and energy. The resulting framework, PES, circular economy, and energy efficiency were thus well aligned with government priorities and well-integrated into national priorities for future actions. Another sustainability strategy was to ensure national ownership and leadership in implementing the activities. Project implementation was led mainly by key ministries involved in each component. Their active involvement throughout the project duration contributed to enhancing capacities and knowledge related to technical subjects and it contributed to effective integration of proposed measures into institutional priorities. Likewise, the project promoted a learning-by-doing approach for all other target stakeholders including NGOs and local communities, which allowed them to acquire knowledge and skills through implementing activities.

Overall, these strategies were successful in building and institutionalizing enabling regulatory frameworks, and disseminate knowledge and skills among government and stakeholders, which significantly increased the likelihood that activities and results will be sustained beyond the project duration. The NCSd/MoE also set project sustainability as a key government priority. For example, for PES, NCSd/MoE has developed related plans covering the following key actions:

- Enhance capacity of government institutions, partners and relevant stakeholders to implement PES's roadmap, instruments, and legislation/policy;
- Integrate PES modality into landscape planning, ecotourism program, REDD+ and other relevant existing projects such as Cambodia Sustainable Landscape and Ecotourism Projects;
- Support sustainable financing mechanism and implement resources mobilization action plan for PAs management; and
- Engage stakeholders, especially private sectors, and research institutions to participate and implement of PES program and resource mobilization strategy and action plan.

Management effectiveness review

1. Quality of monitoring

According to the final evaluation report, the overall quality of monitoring and evaluation was “highly satisfactory.” The project management team regularly monitored implementation and reported on activities. The UNDP CO provided active support to the PMU for preparing project annual progress reports and annual work plans in line with the UNDP guidelines, for following up on financial payments and transactions, and for implementing project activities. The project team also regularly updated the Embassy of Sweden on implementation progress and results as well as issues which required management attention and guidance. This was done through project board meetings, technical level meetings and field monitoring visits to project sites and meet with communities and stakeholders who are part of the project activities

Both UNDP CO and PMU closely monitored the quality of project delivery and its efficiency. For example, while the project document requires only annual project board meetings, the project conducted more frequent project board reviews as needed. The project also made timely course corrections including repurposing activities to swiftly address challenges, for example, due to the Covid outbreak. The UNDP CO also made field visits whenever possible to monitor field level implementation and meet with project stakeholders including communities and partners for effective implementation.

2. Timely delivery of outputs

Overall, project outputs were delivered in accordance with the schedule set up in the initial project results framework. However, the outbreak of the Pandemic significantly impacted the ability to move forward with activities as planned. For obvious reasons, the most affected activities were physical meetings, field level activities, and consultations. In response, the project applied an adaptable management approach. The project team reviewed all activities impacted by COVID-19 and proposed alternative measures, notably on-line meetings. When necessary, alternative activities that would contribute to the overall project objectives were adopted. For example, the budget planned for outreach events related to energy efficiency was reallocated in support of the establishment of solar mini-grids in more off-grid communities. By the end of the project, the project had achieved a majority of the planned outputs, with the aforementioned exception of activities that required field level implementation and consultations (See the section III project results result summary and Annex 1 for more information)

3. Resources allocation and Cost-efficiency

The project allocated resources effectively. The proportion of staff costs was above 30 % of the total project budget. The main reason was to meet the project goal to build a high-level enabling environment for sustainable development. A team of senior level experts was involved in providing timely and quality support for each of the quite different technical components. A SB5 level national project manager (with 80 % of his time) oversaw the overall project management and provided specific technical advice for 1) NRM and 2) Circular Economy. A P4 level international environmental policy specialist (30 % of her time) provided technical support for 1) NRM and 2) Circular Economy. A P5 level international energy adviser (40 % of his time) and SB4 level national energy officer (80 % of his time) provided technical support for 3) Energy. This team played a key role in providing support for developing a high-level policy and regulatory framework, but also identifying and testing innovative policies, ideas, and methods.

The project utilized 99.8 % of the total budget. The initial project budget was US\$2,208,268 (2019-2020) of which US\$ 1,848,268 was Sida grant and US\$ 200,000 from UNDP co-financing. With 6 months cost extension, the final total budget increased to US\$3,221,079, which included UNDP co-financing US\$ 316,240.

4. Cost-effective use of inputs

In general, the project made effective use of staff time, inputs from international and national consultants, and equipment in order to produce intended results. Most targets were achieved by the end of the project. Yet, the ambitious design of the project, which entailed a large and diverse number of activities and targets created practical challenges related to the allocation of sufficient time for all the activities. Future design would benefit from more realistic assignments of staff time to ensure attainment of all project targets and from better prioritization of activities to maximize the impact and quality of results.

III. Project results summary

Output 1: Natural Resources Management

Background

As part of the effort to strengthen the national conservation agenda, Cambodia expanded its protected areas (PAs) to over 41% of the country (7.3 million ha of land) in 2016. These areas provide a range of ecosystem services, including clean water, air, carbon storage, and wildlife habitat, which are part of a nation's wealth, or "natural capital".

However, these protected areas have come under heavy pressure, with a loss of natural habitats and degradation of forests in many upstream watersheds. This has significantly impacted the recharge of groundwater, downstream fisheries as well as carbon sequestration capacities. It has also negatively impacted the livelihoods of many rural people, especially women and the poor, who are dependent on forests for subsistence and income. These worsening conditions are not least due to limited human and financial resources available to effectively manage the vast protected areas. At present, 7.3 million ha of protected landscapes are managed by just 1,260 Rangers (i.e. over 5,000 ha/Ranger). Moreover, the allocation of government budget to implement conservation efforts remains minimal for sustainably managing 41 % of Cambodia's total land area.

To improve the situation in terms of financial and human resources, the RGC has expanded opportunities for communities to engage in NRM, among other things by establishing new Community Protected Areas (CPAs). Additionally, in 2016, the RGC released an official order (*sochornor*) to advance dialogue on Payment for Ecosystem Services (PES) to mobilize additional financial resources for PA management. The RGC designated two locations: Phnom Kulen National Park (PKNP) in Siem Reap Province and Kbal Chhay in Preah Sihanouk Province, as pilot PA sites to test how PES would be able to support these watersheds, which play a vital role in providing clean water for tourism, a cornerstone of the national economy. Using lessons from these pilots, the Government planned to introduce a national payments policy.

Key objectives

In order to address human and financial resource challenges in managing protected areas, Output 1 activities sought to design and pilot innovative solutions to contribute to 1) strengthening the role of local communities and stakeholders in managing natural resources and ecosystem services and to 2) sustainable financing of PAs through operationalizing PES.

In late 2019, the outbreak of Covid-19 added another layer of problems to the management of protected areas. A significant number of migrant workers returned to rural areas after losing jobs in cities or neighbouring countries due to the Pandemic. In desperate search for money and food, many went to the forests to cut trees and hunt animals. In mid 2020, the Embassy of Sweden provided additional fund to offer income generation opportunities through tree-planting for those who were most affected by the Covid-19 in the areas of Siem Reap and Pursat.

Key results

Below the key results under this component are listed.

Expansion and strengthening of community based NRM (CBNRM)

The project supported CBNRM gender assessments, training workshops, provisions of alternative livelihood options, and boundary demarcation.

At the initial stage of project implementation, the project completed detailed gender assessments of CBNRM to enhance opportunities for women to participate in the management of Community Protected Areas (CPAs) inside Phnom Kulen National Park (PKNP). Its recommendations have been incorporated in awareness raising and training workshops facilitated for local villagers in PKNP.

The project also conducted a series of meetings and workshops to enhance the capacity of communities and the CPA network to effectively manage protected areas. The objectives of these activities were to support the effective operation of a CPA network and to clarify the roles and responsibilities of villagers with respect to setting by-law regulations and dealing with illegal activities. Enhanced opportunities for women to participate in the CPA management committees were also explored. Clear boundary demarcation of the National Park and CPAs located inside the Park was prerequisite to prevent illegal encroachments. The project facilitated the placing of over 100 marked and geo-referenced posts to protect CPAs and a 900-ha watershed of the Klah Khmum village. To alleviate the pressure on the protected area, the project provided alternative livelihood options to cashew nut plantation (a major driver of deforestation) for marginalized villagers in Po Pel village that manages one of the CPAs inside the Phnom Kulen National Park. As a part of this effort, the project built a water distribution system targeting 23 families (including 95 females and 100 children), along with the aim to alleviate the workloads of women in the village.

Cash for work through tree planting

As an emergency relief response to COVID-19, from September 2020 to May 2021, the project engaged a total of 2,810 people from 1,915 vulnerable families in Pursat and Siem Reap provinces, most affected by Covid-19 pandemic crisis for the tree planting activities.

Under this cash-for-work programme, at least US\$ 196,084 was paid to the affected communities, including 513 women headed households. A total of 147,800 seedlings, including 97,800 seedlings of 14 local species and 50,000 seedlings (with five local species), were planted covering the total area of 181.93 hectares (ha). The survival rates of seedling varied depending on the implementing partner sites, ranging from 65% to 90%. During the maintenance period in 2020, 8,862 seedlings were planted to replace dead tree seedlings to ensure that the survival rate to reach 90%. The project also established a tree nursery equipped with a solar water pump to water the seedlings. This facility was handed over to the fishery community for future reforestation programme(s).

Operationalizing Payment for Ecosystems Services (PES) in Cambodia

To mobilize financing for protected area management the project sought to establish and operationalize PES. To achieve this objective, the project defined targets as part of the development of a national PES roadmap. They were based on testing and operationalization of two pilots in Kulen Mountain and Kbal Chhay and led to development of enabling regulations.

Development of a national PES roadmap: To enable PES operationalization, the project supported development of a draft National PES Roadmap (2021-2031). This roadmap defined an overall vision, priority actions and a plan for upscaling PES pilots to the national level. The short-term target (2021-2023) was to mobilize funding for the MoE and Provincial Department of Environment (PDOE) beyond allocations from the National Budget to ensure the effective implementation of priority actions in existing PA Management Plans). Over the long term (2024-2031), the roadmap seeks put in place a national payment scheme for environmental services to benefit conservation and collaborative management efforts across PAs in Cambodia.

Awareness raising on PES: The concept of PES was relatively new to Cambodia. Hence, the project also focused on raising awareness through creating videos and posters targeted both at the general public and private sector. The project also organized a National Dialogue on

“Payment for Ecosystem Services in Cambodia” in September 2019 with over 160 participants from relevant line ministries, provincial governments, the private sector, NGOs and local communities. The dialogue included presentations of successful PES examples from other countries and in Cambodia, and proposals of short and medium-term interventions aimed at operationalizing PES.

Operationalization of two PES pilots: One of the key targets included in the national PES roadmap was to operationalize two PES pilots.

Seeking to identify appropriate options for PES operationalization, the project carried out PES feasibility studies in the two pilot sites which focused on 1) assessment of possible impacts of deforestation in Kulen Mountain on water supply in downstream Siem Reap town and 2) an assessment of “Willingness-to-Pay” (WTP) of visitors to the park and the tourism industry for Phnom Kulen. The first assessment highlighted that deforestation will likely have negative impacts on long term water availability and focused attention on the urgent need to protect the forests in Kulen Mountain. The second study confirmed the feasibility of collecting fees from tourists for the protection of watersheds.

These research findings served to confirm both the urgency and overall feasibility of PES. This information was used in the project to develop a set of practical operational recommendations to the MoE. The recommendations included 1) allocation of a portion of the already existing Environmental and Social Fund (ESF) to finance urgently needed priority actions; 2) a draft operational guideline and mechanism to mobilize funds from the tourism and industry sectors (initially on a voluntary basis with the intention to make payments compulsory later on); and 3) establishment of institutional arrangements including a multi-stakeholder PES management committee to manage and oversee the PES Fund.

These recommendations put in place the foundation for operationalizing the research findings from the PES pilots. However, due to the COVID-19 outbreak, the project was unable to fully accomplish this goal, since field level consultations with target stakeholders became impossible. Since COVID-19 moreover hit the tourism sector badly, mobilizing payments became an infeasible option in the short term. Hence, the project had to look for other options.

Full operationalization of PES pilots will require the follow-up actions listed below, which will be pursued by ongoing projects and initiatives supported by UNDP including the Sida Global Programme, the Bio-financing initiative and the Cambodia Sustainable Landscape and Ecotourism project.

- Development of a Management Plan for PES for Kbal Chhay to define key priority actions and viable funding sources for PES fee collection:
- Further refining the roles of different government agencies and other stakeholders on revenue collection, disbursement and monitoring of fund management.
- Completing negotiations between the supply and demand sides to reach agreement on the types and sizes of initial investments in the protection of the PKNP and KCMUA; and
- Overseeing transparency and accountability in revenue collection and disbursement.

Output 2: Circular Economy

Background

The combination of rapid population growth and economic development in Cambodia has led to an exponential surge in the volume of municipal and industrial solid waste. This has become significant challenge for waste management.

Current rates of solid waste disposal in municipal landfills are expected to double by 2029, reaching 2.1 million tons per year. This will likely exceed the capacity of all existing landfills in Cambodia. The situation is particularly alarming in major cities such as Phnom Penh and Siem Reap. In Phnom Penh, around 3,000 tons of municipal waste is generated every day. More than 80 % of this waste consists of recyclable materials (e.g. organic 52%, plastic 21%). However, present waste management practices focus mainly on collection and disposal at landfills and private companies do not sort, recycle, or reuse waste materials. A minimal volume is collected informally by people who gather waste from landfills and households and sell recovered valuables to intermediaries, usually destined for Thailand or Vietnam for further processing.

These informal garbage collectors face health risks because of their direct exposure to toxic substances and accidents on landfill sites. At the same time, the large amount of untreated waste exposes the general population to numerous risks such as water pollution, the spread of disease, odour nuisances and air pollution from burning garbage. It also contributes to GHG emissions.

Key objectives and main activities

In response to these challenges, output 2 activities sought to introduce and mainstream “Circular Economy (CE)” as a solution to the problems of waste management and treatment. The key goal of the output 2 activities is to test and promote viable CE options to ensure sustainable management of resources and waste with a particular focus on plastic waste.

When this project was initially introduced, there was limited awareness about circular economy and its benefits for stakeholders and country as a whole. There was also limited awareness about plastic pollution and how different stakeholders might be involved in providing solutions.

On this background, initiating a transition towards a circular economy and effective plastic management required an integrated approach, which built on the following sets of interventions: 1) research to identify existing CE barriers and opportunities, 2) development of an enabling policy and regulatory framework for CE, 3) raising awareness, 4) engaging the private sector, and 5) piloting a CE model in a municipality.

Key achievements

Research to identify existing CE barriers and opportunities

In order to identify viable CE options, in cooperation with the UNDP Policy and Innovation unit, the project conducted various kinds of background research. They included 1) rapid review of single-use plastic regulations in countries across the world, recommendations for Cambodia, and research on 2a) plastic waste recycling, 2b) organic waste recycling and 2c) Waste to Energy (WtE) options to identify the state of practice, existing barriers and opportunities for promoting CEs. These research findings were incorporated into a recommendation not only for a CE Strategy and Action Plan and the Plastic Taskforce and a draft sub decree on plastic management as discussed below.

Developing an enabling policy and regulatory framework for CE

Drawing on the research findings, the project supported the MoE in developing an enabling policy and regulatory framework for relevant stakeholders to begin a CE transition.

A key component of this framework was **the National Circular Economy (CE) Strategy and Action Plan (2021 to 2035)**. The CE Strategy set the overall visions and roadmap for the country to transition from a linear to circular economy model. The CE strategy defined closing the loop of the entire value chain (production, distribution, consumption, waste generation, and waste treatment) as a national goal. The plan also outlined a clear roadmap, along with short-, medium-, and long-term priority actions to enable Cambodia's transition to a circular economy. The roles of different ministries, private sector, development partners, academic and civil societies were clearly defined for the proposed actions.

To ensure national ownership and effectiveness of the proposed actions, the project involved all concerned ministries and development partners in a series of consultation meetings. This was also to raise awareness about circular economy and clarify what concrete actions each ministry and relevant actors would be able to take in the short, medium, and long terms.

Another key component was **a draft sub-decree on plastic management**. Over the last 2.5 years, plastic pollution became increasingly visible in Cambodia along with the country's rapid economic development and population growth.

In 2019, the project supported the MoE and NCS in establishing a Special Taskforce on Plastic. The Taskforce focused on three priority areas for interventions: 1) Policy and regulation, 2) Communication and outreach, and 3) Business development with the objective to promote the 4 Rs (Refuse, Reduce, Reuse, and Recycle) of plastic. From 2019 to 2021, the project supported the MoE in implementing a new guideline to internally implement 4 Rs to ban the use of plastic bottles on their offices.

The project also supported the MoE in developing a draft sub-decree on plastic management. This sub-decree included a full range of measures to reduce and minimize the production, the use and consumption of plastic items, and to ensure proper management of plastic waste through reuse, recycling, and energy recovery. Economic and regulatory measures for single use plastic items (straws, bottles, packaging materials) were also included as initial proposal for further consideration.

Raising awareness about CE and the urgency to take actions against plastic pollution

Based on the understanding that the effectiveness of new policies and regulations depends on improved awareness and behavioural change among stakeholders including both citizens and the private sector, the project promoted awareness raising among all relevant stakeholders. These stakeholders included NGOs, universities, celebrities, and development partners,

Besides developing posters, a booklet, and website content for both MoE and UNDP, and social media messages to raise awareness about circular economy, and plastic problems, the project supported **a youth-led plastic-free campaign with the Royal University of Phnom Penh (RUPP)**. This campaign involved over 300 students and included a competition where students created videos to raise awareness and promote behavioural change.

To enable wider outreach, the project further conducted joint campaigns against plastic waste with Cambodian celebrities. The campaign entailed launching a cartoon video featuring a plastic monster, and two music videos and a TV commercial on the topic of plastic. The campaign also involved a three-day concert to raise awareness of plastic issues, which was held during the Water Festival. This campaign gained more than 10 million social media views. A TV commercial on 4Rs (Refuse, Reduce, Reuse, and Recycle) reached 1.3 million viewers.

Engaging the private sector in piloting and adopting CE measures

The private sector's active engagement is crucial in adopting sustainable energy and resources, improving energy and resource efficiency, introducing alternatives to single-use items, promoting reuse, repair, and recycling, and operating Waste to Energy businesses. While there was growing interest and support among the private sector for more environmentally friendly practices, information on how to implement these actions is still limited and not easily accessible.

As an initial step towards enabling the private sector to adopt CE practices in Cambodia, the NCS and MOE developed a CE Private Sector Platform. This platform's objective was to disseminate information on CE measures and support the private sector with information about CE adoption.

In partnership with the company H&M, the project assessed CE options for the garment sector, which is the largest industry in Cambodia. This assessment was in response to two of the company's major environmental challenges. They are reliant mainly on fuelwood as the main energy source for boilers and generation of a large volume of textile waste. The garment sector had been exploring options such as a small-scale on-site Waste to Energy (WtE) solution to turn textile waste into energy and a large-scale WtE solution involving a cement kiln for co-processing waste. The joint assessment showed that while this on-site WtE solution successfully reduced the use of fuelwood, burning textile created another environment risk, of air pollution unless properly operated. Thus, the project provided recommendations for appropriate measures to minimize environmental and public hazards as well as operating manuals and guidelines.

Piloting CE approach in a municipality

The project sought to design a small-scale CE pilot scheme for Kep in order to develop a model applicable to smaller towns with limited access to infrastructure and technology.

This included formulating a proposal for simple waste separation requirements (e.g. into organic and non-organic), designing adequate incentives in support of waste separation at source, and devising viable business models for waste depot investment as well as governance structure mechanism. The project also worked to operationalize the CE model by engaging stakeholders including the subnational government, private sector, and households. Initially the project intention was to work with the major hotels and markets to sort waste for separate collection and treatment, and then later on with households. The project also planned to support recycling industries and social enterprises to be able to treat sorted waste. However, due to the outbreak of COVID-19, the implementation of the planned activities was delayed and could not be delivered. Instead, the project focused on feasible options given the circumstance by contributing to 1) incorporation of a CE into its five-year development plan and 3-year rolling plan for Kep province for 2020 and 2) drafting two municipal level regulations for waste collection pricing and on the establishment of a municipal solid waste management unit at the Kep municipality.

Development of scaling-up strategies including programming and new partnership

The project formed strategic partnerships to advance CE dialogues with relevant institutions and initiatives, including existing UNDP projects such as Cambodia Climate Change Alliance, the World Bank (on plastic interventions), EU Switch Asia Programme (on sustainable consumption and production) and Global Green Growth Institute (GGGI) (on the Kep pilot). The UNDP Policy and Innovation unit also explored additional funding opportunities to complement and leverage the impacts of the BESD interventions, including the combatting marine plastic litter project funded by the Embassy of Japan.

Output 3: Energy

Background

As of 2018, out of Cambodia's 16.5 million population, 4.87 million¹ had no access to grid electricity and rely on car batteries, wood, and other traditional fuel sources for energy².

On the supply side, Cambodia significantly increased the capacity of electricity generation over the last decade, from 584 MW in 2010 to 2,756 MW in 2019. In 2019, the total power generation capacity consisted of 1,330 MW (48%) from hydro power, 675 MW (24%) from thermal power (mainly coal), 227 MW (8%) from fuel oil-based generation, 124 MW (4%) from renewable energy, and captive power of 400 MW (15%) to meet power demand during the dry season³. As these numbers indicate, the share of clean and sustainable energy such as solar remained minimal. Moreover, an estimated 1,037 villages, mostly located in remote islands, and highly vulnerable to climate change remained without grid connection.

On the demand side, the residential and commercial building sector consumed an estimate of 52% equivalent to 3.5 Mtoe⁴ in 2017, making it the most energy consuming sector. Since 2000, 43,136 construction projects have been approved for a total land area of 114 million m². This rapid growth poses increasingly severe challenges in terms of electricity demand and was a major cause of the power shortages during the dry season in 2019.⁵

Key objectives and main activities

In response to this situation, the objective of output 3 was to mainstream solar energy as a clean and sustainable renewable energy and an affordable and reliable energy for off-grid vulnerable communities.

Another objective was to promote energy efficiency in residential and commercial buildings as one of the most cost-effective ways to meet the growing electricity demand, to boost competitiveness and welfare, and to reduce the environmental footprint of the energy system.

Key achievements

Mainstreaming solar energy into the national energy mix

While Cambodia has very favourable natural conditions for solar energy (e.g. ample sunshine and long period of sunny days), the promotion of solar faced significant challenges. This was mainly due to dominant, powerful interests in support for coal-based energy.

This meant that successful promotion of solar would depend on the creation of an equally powerful network of support from high-level decision-makers. In turn, this required building a case of solid scientific and economic evidence to convince the relevant decision-makers about the potentials and benefits of solar PV. Opening the door for solar energy to be mainstreamed as

¹ Data from Cambodia's Voluntary National Review 2019 on the implementation of the 2030 Agenda for Sustainable Development https://www.kh.undp.org/content/cambodia/en/home/library/environment_energy/cambodia-s-voluntary-national-review-2019.html

² "Cambodia Energy Sector Assessment, Strategy, and Road Map" December 2018, available at <https://www.adb.org/sites/default/files/institutional-document/479941/cambodia-energy-assessment-road-map.pdf>

³ https://eac.gov.kh/uploads/salient_feature/english/salient_feature_2019_en.pdf

⁴ Million Tonnes of Oil Equivalent

⁵ <https://asia.nikkei.com/Economy/Chinese-construction-rush-aggravates-Cambodia-s-electricity-shortage>

a part of the national energy mix also entailed demonstrations of the viability and success of solar PV in providing energy access to off-grid poor rural communities. Furthermore, widespread adoption of solar energy required increasing awareness about and interest in renewable energy among diverse stakeholders as well as building the capacity of technicians in the areas of solar installation, operation and maintenance.

Against this background, in collaboration with MME, NCSD and the Policy and Innovation Unit of the UNDP Cambodia, the project contributed to the development of two evidence-based research related to solar: 1) De-risking Renewable Energy Investment (DREI) study and 2) “Economics of Solar” study.

The DREI report included a comprehensive assessment of regulatory, financial, and technical barriers of introducing solar PV energy in different sectors and recommended measures to remove those barriers. The Economics of Solar study assessed the costs and benefits of solar PV in comparison with other types of energy. It further demonstrated how solar energy could boost the economic efficiency by diversifying Cambodia’s sources of energy generation. Both studies played an important role in informing key decision-makers at MoE, NCSD, MEF, and MME to advance further policy and institutional planning on solar PV.

Besides these studies, the project developed and disseminated various communication materials such as videos in order to improve the understanding of solar, and a leaflet on Solar Home System (SHS) for suppliers and end-users. With a view to enhance technical capacities, the project developed an SHS guideline (approved by MME) and conducted a training session for 20 engineers/technicians on SHS design, installation and maintenance for off-grid solar energy.

The project also sought to test and showcase the viability of solar through demonstration activities on the ground. This was done through the Clean Energy and Incubation Program and via solar PV mini-grids to off-grid communities in Kampong Chhnang and Ratanakiri provinces.

The Clean Energy and Incubation Program identified and tested viable business models to provide solar PV technologies to rural communities. This programme provided seed grants to three winning teams (Cricket House, Sunla, and Green Farmer Community), and supported 63 direct and indirect jobs, including 47 for women. Cricket House used solar-powered technology to raise micro-livestock as an alternative livelihood opportunity for marginalized farmers and supported their connection to relevant markets. Sunla (Bong Snacks) used solar drying technology to combat post-harvest income loss for rural farmers. Green Farmer Community used solar-powered incubators to hatch eggs and as part of environmentally friendly production.

As noted, the project supported **the building of solar mini-grids to provide energy to off-grid remote rural communities**. This work started with the assessment and identification of appropriate off-grid solar technologies, including SHSs, direct current (DC) or alternating current (AC) mini-grids, solar water pumping, and other productive use applications for rural communities.⁶After evaluating the technological options, the project selected implementation of both DC and AC mini-grids as an innovative approach, and are flexible in meeting the needs of the villages.

As a result, a total of 225 households gained access to electricity. These include 140 households with 1,245 people in three villages in Kampong Chhnang province and 85 households with 341 people from a Jarai indigenous village in Ratanakiri province. For the household selection, priorities were given to women-headed households and families with disabilities. About 30 women-headed households and 10 households with disability or elders were included among the beneficiaries. 55 households in Ta Daok village have been upgraded to more than

⁶ Refer to https://seveaasso.sharepoint.com/f/s/SeveaOneDrive/EmCJWkhp_5CqvNzWQVg2LwBkyK8nQ_gfILG8asOY9NOGA?e=S9WbgW

750Wh/day because of increase in their electricity consumption and provided them with 600 W inverters. Also installed streetlighting to improve safe mobility and security for women and girls at night. All these mini-grids are owned and managed by village development committees. For documentation, a video was produced featuring life with electricity from solar mini-grids.

Overall, the project played an important role in demonstrating the viability of solar PV- especially its comparative advantages for providing affordable energy to off-grid rural poor households and meeting energy needs in rural areas.

Promoting energy efficiency for buildings (January to June 2021)

During the last 6 months, the project focused on energy efficiency initiatives aimed at the highly energy-intensive building sector.

In January 2020, Cambodia's Law on Construction was enacted. This Law defines the general principles, with the requirement of a building technical regulation (BTR), the rules, and procedures for construction sector. One of the considerations is energy efficiency. Accordingly, the project sought to develop and integrate an Energy Efficiency Guidelines for Residential and Commercial Buildings into the regulation.

By the end of the project, the project had finalized the Energy Efficiency Design Guideline for Residential and Commercial Buildings by working closely with the General Department of Construction, Ministry of Land Management, Urban Planning and Construction. The guideline included the following parameters and standards:

- Overall Thermal Transfer Value, $<50\text{W}/\text{m}^2$
- Roof Thermal Transfer Value, $<50\text{W}/\text{m}^2$
- Lighting Power Density, <12 to $18\text{W}/\text{m}^2$ (depending on building type)
- Air Conditioning, Ventilation.

To showcase the efficiency benefits, the project implemented energy efficiency measures at two Buildings of General Department of Energy. The project also produced a video to demonstrate energy efficiency in practice. Because of COVID-19 community outbreak in February 2021, the project was unable to organize originally planned events such as an exhibition, business talks, and consultative workshops. Instead, funds were used to establish solar mini-grid at Pa Tang village in Ratanakiri province.

Development of scaling-up strategies including programming and new partnership

To sustain and scale up operations of solar and energy efficiency would require follow up actions. These include 1) further refinement of the business model for mini-grids to meet the energy demands of vulnerable communities, 2) working with financial institutions, in support for delivering a viable mini-grid business model that expands energy access and 3) wider application of energy efficiency measures in the building sector. These activities will be supported by the Sida Global programme, which has energy as one of its top priorities and scale up of solar mini-grids initiative in "hard to reach" off-grid villages (in pipeline).

IV. Implementation challenges

At the project formulation stage, potential risks were examined and recorded in the project Document, along with mitigation strategies and assumptions.

The biggest implementation challenge, which the project faced during the implementation, was the COVID-19 pandemic, which was not foreseen in the project design. During the initial period of the pandemic, several organizations, including government and UN agencies, enforced work-from-home and 'no travel' measures to keep their employees safe. Related restrictions significantly affected project implementation and progress. At the time, project activities were delayed as travel and meetings had to be curtailed for safety and to contain the virus's spread.

In order to adequately respond to the risks, the project took the following actions.

For PES, the project changed its approach from physical meetings or workshops to use technology such as online platforms for knowledge sharing and dialogues and videos on the importance of the PES initiative in Kbal Chhay and Phnom Kulen Protected Areas.

For waste management, the project changed its approach from direct trainings with subnational administration on plastic management to producing two videos on (1) Circular Economy concept and waste management and (2) methods for 5R (refuse, reduce, reuse, recycle, remind), and production of billboards and waste bins to raise public awareness.

For energy, the project changed the activities related to energy efficiency events such as an exhibition, business talks, and consultative workshops to cover the costs to establish additional DC mini grids in Ratanakiri province.

Despite these measures, implementation challenges remained for activities which due to the inability to directly meet with stakeholders and follow up on activities in person. For example, the project was unable to fully accomplish its goal to operationalise PES since field level consultations with target stakeholders became impossible.

The project also worked to operationalize the CE model in Kep province by engaging stakeholders including the subnational government, private sector, and households. Initially the project intention was to work with the major hotels and markets to sort waste for separate collection and treatment, and then later on with households. The project also planned to support recycling industries and social enterprises to be able to treat sorted waste. However, due to the outbreak of COVID-19, the project implementation of the planned activities was delayed and could not be delivered as planned. Instead, the project focused on feasible options given the circumstance by contributing to 1) incorporation of a CE into its five-year development plan and 3-year rolling plan for Kep province for 2020 and 2) drafting two municipal level regulations for waste collection pricing and on the establishment of a municipal solid waste management unit at the Kep municipality.

(See annex 2 and 3 for the updated risk log and project issues and actions)

V. Lessons learnt and next steps

This project can be considered as a “pioneer” initiative. It introduced numerous new concepts, ideas and innovative solutions, which were not present in Cambodia at the time of inception. Among those were the concept of payments for ecosystem services, circular economy, solar mini-grids for off-grid remote communities, and energy efficiency for buildings.

This project was also unique in terms of its design and scope, since three projects were effectively packaged into one. Because the components and themes of these three projects were distinct and only partly overlapping, specific sets of interventions addressing the particular challenges in each of the areas were needed.

The rationale behind this project design and scope was to respond to the urgent need to offer viable development solutions for priority environmental issues (NRM, waste and energy) in Cambodia. (The major issue of climate change is addressed through the Cambodia climate change alliance project, which is also supported by Sweden). Thus, the project supported: 1) robust research to identify “what solutions may work” for a specific subject, 2) testing and piloting of recommended solutions, 3) creating an enabling policy and regulatory framework to support wider application and scaling up of the proposed interventions and 4) raising awareness through strategic communication (See Annex 5 for a list of communication materials).

Despite this ambitious scope, the project succeeded in achieving a majority of project targets. The project played a crucial role in building an enabling regulatory and policy framework and testing and piloting these new concepts to demonstrate their aims and purposes, and their environmental and economic benefits. After 2.5 years of project operations, the project succeeded in demonstrating tangible environmental and economic benefits of the new concepts and solution, which the project sought to mainstream for the target stakeholders. For example, a growing number of industrial players came to use circular economy as a guiding principle for business operations. In the case of waste management, the government now shows a strong interest and commitment to explore CE options through promotion of measures of sustainable consumption and production, recycling, composting and waste to energy options. The project has also demonstrated the viability and success of solar to provide energy access to off-grid poor rural communities, and this has further opened the door for solar energy to be mainstreamed as a part of the national energy mix.

In part, the project was able to achieve these results because senior level technical experts from both the government and UNDP for each of technical areas were assigned to provide timely and high-quality technical assistance to project activities throughout. Another factor was due to the effective and adaptive management led by the PMU supported by the UNDP team. The outbreak of COVID-19 impacted the overall project implementation, as physical meetings/workshops and field missions became impossible for an extended period. The PMU took immediate action to repurpose and reprogramme initiatives to be able to deliver planned activities to the extent possible but without depending on physical meetings.

Despite these measures, the project faced numerous challenges in fully implementing piloting measures at the field level. The difficulty in conducting field missions due to the Covid-19 outbreak affected the operationalisation of policy designs that depended on results from pilots, as seen in the case of payments of ecosystem services. Another possible reason attributing to the inability to achieve some of the project was that the project had too many ambitious goals, which meant that project stakeholders had to prioritize their engagements. Another challenge (to which the final evaluation report also referred) was the limited integration among three project component activities (NRM, waste and energy). Since the three components of activities were

quite distinct, respective activities were implemented rather separately by different set of government partners and stakeholders.

These challenges offer important lessons for future projects. First, it is imperative to design projects with a realistic set of activities in consideration of project resource and project duration. This will make it possible to focus on high priority activities and maximize project impacts. Second, the project should focus on the ways to ensure an integrated and coherent approach across project components.

VI. Financial status and utilization

Financial status

Table 1: Contribution Overview (01 January 2019– 31 October 2021)

Donor Name	Contributions (USD)		Cumulative Expenditure	Balance
	Committed	Received		
Sweden	2,904,840.06	2,904,840.06	2,901,715.67	3,124.39
UNDP [TRAC]	316,238.78	316,238.78	313,020.20	3,218.58
Total	3,221,078.84	3,221,078.84	3,214,735.87	6,342.97

Notes: This expenditure included financial audit fee and final evaluation which were paid after 30 June 2021. The certified final financial statement to be submitted by 30 June of the year following the financial closing of the project.

Financial utilization

Table 2: Annual expenditure Report (01 January 2021-31 October 2021)

Activities - Description	Annual Budget (BREV/G05)	Cumulative Expenditure			Balance	Delivery [%]
		Gov't [Disbursed]	UNDP [Disbursed]	Total		
Output 1: CBNRM institutions strengthened and financial resources mobilized for sustainable NRM	261,668.67	147,779.82	132,365.86	280,145.68	(18,477.01)	107.06%
Output 2: Waste reduced, recycled and reused through the application of circular economy model.	294,241.58	206,613.66	101,060.38	307,674.04	(13,432.46)	104.57%
Output 3: Improved access to clean, affordable, and sustainable energy for the rural poor	290,166.84	53,570.73	249,124.81	302,695.54	(12,528.70)	104.32%
Project management (PMC)	134,108.17	48,727.79	88,922.56	137,650.35	(3,542.18)	102.64%
Total	980,185.26	456,692.00	571,473.61	1,028,165.61	(47,980.35)	104.90%

Notes: This expenditure period 01 January 2021- 31 October 2021 was included PO commitment amount USD 54,323.32 in 2020

Table 3: Cumulative Expenditure Report (01 January 2019– 31 October 2021)

Activities - Description	Total Budget (G05)	Cumulative Expenditure			Balance	Delivery [%]
	[2019-2021]	Gov't [Disbursed]	UNDP [Disbursed]	Total		
Output 1: CBNRM institutions strengthened and financial resources mobilized for sustainable NRM	1,104,878.68	516,784.56	603,727.87	1,120,512.43	(15,633.75)	101.41%
Output 2: Waste reduced, recycled and reused through the application of circular economy model.	852,540.47	307,357.62	553,514.87	860,872.49	(8,332.02)	100.98%
Output 3: Improved access to clean, affordable, and sustainable energy for the rural poor	832,961.30	218,707.38	581,752.42	800,459.80	32,501.50	96.10%
Project management (PMC)	430,698.38	146,549.05	286,342.10	432,891.15	(2,192.77)	100.51%
Total	3,221,078.84	1,189,398.61	2,025,337.26	3,214,735.87	6,342.97	99.80%

Annex 1: PROJECT RESULTS AGAINST INDICATORS

FOR THE PERIOD FROM 01 JANUARY 2019 – 30 JUNE 2021

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
Output 1: CBNRM institutions strengthened and financial resources mobilized for sustainable NRM			
1.1. Extent to which CBNRM institutions are strengthened Measured on a three-point scale: 1= Some extent: 2= Moderate extent: 3=Great extent:	0	Target: 1 Result: 2 (Achieved)	Achieved exceeding the target. Community institutions and networks were strengthened through engagement of hundreds of men and women working in CPA, community-based ecotourism, and water supply committees. Tenure rights of communities part of the project have improved with the expansion of CPA area by 1,598 ha. Some old cashew plantations were returned to the Kulen Natural Park and the ecosystem of Prasat Krahorm archeological site is expected to regenerate in the next five years.
1.2. Number of total and female headed households benefit from CBNRM	N/A	Target: 50 Results: 513 women-headed households (Achieved)	Achieved exceeding the target. For instance, the cash-for-work tree planting benefited at least 513 women-headed households in Pursat and Siem Reap to cope with their livelihood crise during the COVID-19 pandemic. In addition, the project also supported to build lifelong skills. These included animal raising and basket making skills are being practiced by many households in Kulen National Park, including 30 women. Adding the benefit from CPA expansion, some other alternative livelihood activities, ecotourism , were promoted for Po Pel community. Once the tourism recovers, ecotourism related activities from waterfalls and natural tracks are expected to bring additional income for the community. In addition, a solar pump water supply is serving at least 37 households and 100 primary school children in Po Pel village.
1.3. Extent to which pilot PES approaches are operationalised for Kulen Mountain Measured on a three-point scale as below: 1= Some extent: Initial fund collection and distribution mechanism agreed 2= Moderate extent: PES operational mechanisms (including fund	N/A	Target: 3 Result: 2	Achieved below the target. Operationalization of PES was envisaged to follow four steps: 1) diagnose, 2) design, 3) negotiation and implementation where PES is operationalized, tested and modified. During the project period, actual results of this output could reach Step 3 where PES implementation frameworked were developed and negation were begun. This was due to Covid-19 which impacted the tourism sector where the project originally targeted for PES financing source.. While three Prakas for establishing PES governance structures were drafted and waiting for an approval from the Minister, additional regulatory work would be required to operationalize PES.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
collection & management, implementation strategies and arrangements, and monitoring system) designed 3= Great extent: PES operational mechanisms implemented			
1.4 Extent to which pilot PES approaches are operationalized for Kbal Chay Measured on a three-point scale as above.	0	Target: 3 Result: 2	Achieved below the target. Similar to PES in Kulen, PES implementation framework was developed but financing options could not be operationalized due to Covid-19. Although operationalization was not able to implement, the fund mechanism and willingness-to-pay was fully assessed. After framework is officially endorsed by the Minister, the multi-stakeholder PES fund governance committees will be established to operationalize the pilot.
1.5 Extent to which a national PES policy is developed Measured on a three-point scale: 0= None: No initial drafts 1= Moderate extent: Initial assessment and analysis 2= Great extent: final draft of policy ready for endorsement	0	Target: 1 Result: 2 (Achieved)	Achieved exceeding the target. A PES Mechanism for PES in PKNP and KCMUA is listed as below: <ul style="list-style-type: none"> • Three Prakas on PES governance structure were drafted and awaiting an approval from the Minister of Environment. Those include the governing board and its secretariate and at the national level and two PES Provincial Technical Working Groups are aimed to be established by the local governments of Siem Reap and Preah Sihanoukville provinces • Online surveys for wiliness to pay completed. Most of the respondents show their willingness to pay or contribute if a well function governance system is in place. • National PES Roadmap (2021-2030) drafted.
1.6 Extent to which gender concerns are integrated into the proposed policy measures Measured on a three-point scale: 1= Some extent: relevant policy documents refer to their possible impacts on men and women 2= Moderate extent: relevant policy documents refer to their possible impacts on men and women and include some measures to ensure positive impacts	0	Target: 2 Result: 2 (Achieved)	Achieved as the target. A gender assessment was conducted to mainstream gender aspects in the project workplan. For example the project ensured equal participation of women and men to participate in and benefit from tree planting activities, including 513 women-headed households In CBNRM, the project empowered women groups in terms of management planning, decision making and management of CPA and equal opportunity to have access to livelihoods skills training courses, such as basket weaving, animal husbandry, and hospitality. For access to solar energy, female technician were trained and being played in important role in maintenance the community-based solar DC micro-grids in Stung Chrow. Some women has been benefiting from productive use of electricity in making face marks for sales.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
3=Great extent: relevant policy documents include full measures and budget to ensure positive impacts			In CE strategy included the gender-oriented policy in circular enterprises, innovation challenges and informal economy. In addition, youth has played a crucial role in fostering social change towards a new life style without reduction of single-use plastic consumption.
1.7 Volume of financial resources mobilized to support proposed measures, measured in USD	0	Target: USD 500K Result: USD 68,000 (under target)	Achieved below the target. The result is under target in terms of monetary value, but it leverages pollical support. First, the project could mobilize an additional fund of US\$68,000, which is from GoAL-waters a sub-program under the Global UNDP-SIDA environmental framework program. This will strengthen the fresh water related work in Kbal Chhay where PES pilot is targeted. Secondly, MoE has adopted PES as one of the biodiversity financing options proposal Phase 2, which could sustain the PES operationalization work in the future. Moreover, some of the PES operationalization activates are also mainstreamed with other sustainable financing work for the Cambodia Sustainable Landscape and Ecotourism project and GEF-6 funded Integrated Natural Resource Management Project.
1.8 Number of people with improved awareness on benefits of biodiversity and PES approach Measured by the number of people outreached by communication materials	0	Target: NA Results: 33,700 reaches	Achieved exceeding the target. The number of social media reaches is only generated from the UNDP Facebook page when a post on conserving biodiversity to prevent future pandemic. So far, 13 banners on tree planting installed (ADF & GDLC) to raise public on the site about the ecosystem restoration areas and will remain visible for seral more years to come. Mover, the NCS D PES campaigns has reached 29,200 people, mostly journalists and over 30 news agencies have published PES and its financial, social and ecological benefits. This campaign helps equip those journals with important economic valuation of ecosystem service messaging with can be used for future advocacy to protect Kulen national park.
1.9.1 Number of families being enrolled in income generating activities such as tree-planting, maintenance of forest plantation and nursery development (activity 1.8)	0	Target: 1600 Result: 1,915- Over target	Achieved exceeding the target. This activity helped build community resilience during the pandemic time. Over 50% of women were benefiting from this economic response. 2,810 people of 1,915 families (513 women-headed households) in Pursat and Siem Reap as a COVID-19 Response benefited from generating activities which include tree planting, planted tree maintenance and flooded tree nursery development and maintenance.
1.9.2 Number of Hectares new tree-plantation and number of Ha maintained	0		Achieved exceeding the target. This sub-output was jointly carried out by a number of responsible partners, including DLC, ADF/Provincial DoE, TCO and Fishery Administration (FiA) and RECOFTC. The following are

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
		Target: 140 ha Result: 181.93 ha - Over target	the combined results: <ul style="list-style-type: none"> 147,800 seedlings which include 97,800 seedlings of 14 local species and 50,000 seedlings species were planted on 181.93 ha in 1) Phnom Kulen National Park and Chankran Roy Forestry Community (54.43 ha); 2) The border of the Orchid center (22.5 ha); 3) Stueng Thmei Community Protected Area (55 ha); and 4) Flooded area of Tonle Sap Lake (50 ha). The survival rate was monitored, and it varied depending on the implementing partner sites, ranging from 65% to 90%. To ensure the survival rate reaching 90%, 8,862 seedlings were also planted to replace dead trees under the maintenance stage in early rainy season of 2021.
1.9.3 Dollars paid out as cash compensation for work under activity 1.8		Target: USD 210,000 Result: USD 196,084 (under target)	Achieved below the target. During the project, USD 196,084 was paid to vulnerable people/tree planting workers to restore ecosystem in the target sites. This is because the actual cost for planting and maintenance of the trees varied from one location to another, making the cash-for-work proportion was lower than the planned budget. In contrast, the cost of purchasing the seedlings and transportation were much higher than the planned budget because it reflected the actual market price, availability of a large amount of seedlings and road conditions to transport all seedlings to the restoration areas during the rainy seasons. Some of the labor costs were not excluded from the transportation cost which could be another reason. Nevertheless, the cash compensation was appreciated by all the tree planting workers, authorities and NGO partners.
Output 2: Waste reduced, recycled and reused through application of circular economy models			
2.1. Extent to which a pilot is designed and implemented (municipality) Measured on a three-point scale: 0= None extent: Pilot is not designed 1= Moderate extent: Business model for pilot is designed, proposed, and consulted on with stakeholders 2=Great extent: Pilot is designed and implemented, with a business model tested and resulting data collected.	0	Target: 1 Result: 1	Achieved as the target. Under the NCDSS section, there are a number of results achieved. These results help lay the foundation which needs to be in place for a circular economy model. <ul style="list-style-type: none"> An exchange visit from Battambang waste management staff to learn how the municipal authority has played an important role in waste management Five municipal waste separation depots in Kep were endorsed, including two permanent stations and three mobile waste stations. Establishment of a Deka on waste pricing remains to be endorsed.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
<p>2.2. Extent to which a circular economy pilot is designed and implemented (industry) <i>Measured scale as in 2.1 indicators & targets</i></p>	0	Target: 1 Result: 1	<p>Achieved as the target.</p> <ul style="list-style-type: none"> • Guidelines for on-site incinerators were drafted and under a consultation process to reflect the recommendations from the assessment of garment’s on-site incinerators. • Conclusions and recommendations from emissions testing of air pollutants from small scale waste-to-energy boilers in garment sectors were shared with the EU Switch Asia project run by GERES, GGGI and GIZ working on sustainable development in the garment industry. Adding the knowledge about environmentally safe WTE operations into their training curriculum. • Training on air pollution control was conducted in collaboration Geres a to130 participants and over 70% of them from government factories.
<p>2.3. Number of people outreached for raising awareness on appropriate waste management Measured by number</p>	0	Target: 400 Results: DMC: over 10 million viewers- Over target	<p>Achieved exceeding the target.</p> <p>Outreach campaigns were carried out with various responsible partners as below:</p> <ul style="list-style-type: none"> • Under NCSD/MoE, the Department of Green Economy (DGE) and the Department of Solid Waste Management (DoSWM), the following points are some key results: <ul style="list-style-type: none"> ○ Two videos CE actions in Battambang and 5 Rs developed ○ Development of signboards, bins at the public roads and public gardens are under the design phase and will be installed in the next reporting period. 35 signboards with 5Rs were installed in several highly visible areas in seven touristed provinces, including Kep, Kampot, Battambang, and Preah Sihanouk. • Department of Media and Communications (DMC), RUPP The Clean and Green delivered the following results: <ul style="list-style-type: none"> ○ Over 300 students (206 females) actively participated in the information session, quiz and panelist discussion on impacts of plastic waste. ○ Over 10 groups of students teamed up and submitted their video competition concept notes on plastic. Five ideal video proposals (23 youth producers, 5 females) were selected for video production training. As a result, three winning videos on plastic campaigns received over 4,500 likes on Facebook ○ Under the plastic free campaigns, the followers of the Clean and Green Facebook page have increased its number from 1,000+ to over 6,790 in the last eight months. <ul style="list-style-type: none"> ○ In 2020-21, a second round of youth-led campaign was organised by 10 RE-FIVE team members, (5 females) including a series of vide educational videos, poem to

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
			<p>reduce plastic, photo competition, and digital posters. Their social media (RE-FIVE Facebook, YouTube, and Instagram) has reached over 381,000 views, mainly youth.</p> <ul style="list-style-type: none"> ○ MoE Taskforce on Plastics: <ul style="list-style-type: none"> • The following set of awareness raising/communication materials include: <ul style="list-style-type: none"> ○ Poster for MoE/NCSD to promote plastic actions ○ Action points including green procurement policies to lead by example ○ Media/website contents on plastic page was endorsed and published ○ Booklet and brochure of plastic pollution in English and Khmer ○ Animated infographic video concept for bidding ○ Mascot design for the plastic campaign competition <p>In 2019, the Water Festival single use plastic reduction campaign awareness raising material included two animated videos, three days of a plastic conscious concert, one theme song, and one music video. As a result, the campaign reached over 10 million social media, one third are women.</p> <ul style="list-style-type: none"> • National University of Management (NUM): <ul style="list-style-type: none"> ○ Under this campaign, NUM is committed to increase two more buildings to become plastic bottle free. <p>Together with Combatting Marine Plastic Project, a music video and animation on plastic waste were developed. This will be launched on 28 June 2021.</p> <ul style="list-style-type: none"> • UNDP led circular economy campaigns <ul style="list-style-type: none"> • The link for plastic related research findings and advocacy for policy change is listed on the UNDP Cambodia's page (http://www.kh.undp.org/content/cambodia/en/home/projects/our-action-for-plastic-pollution-in-cambodia.html) • Plastic related campaigns data, the video requesting public to share their photos of plastic reached 138,332 audiences and more than 3,800 reactions, comments and shares. This shows significant result from the Facebook campaign to widely spread the educational messages and engage the public with the campaign. • UNDP website contains all awareness raising material including 4R posters and commercial • Awareness raising materials were jointly developed with the Marine Plastic Project to

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
			increase awareness on plastics impacts to human health, marine ecosystems and the economy. A music video and animation will be launched in June.
<p>2.4. Extent to which enabling policy measures are developed for the support of circular economy</p> <p>Measured on a three-point scale: 0= None: 1= Moderate extent: an initial set of policy measures are proposed 2= Great extent: agreed set of measures receive government endorsement</p>	0	<p>Target: 1</p> <p>Result: 1 – (Achieved)</p>	<p>Achieved as the target.</p> <ul style="list-style-type: none"> The Circular Economy Strategy and Action Plan (CESAP) in English and Khmer was finalized and publicly launched. The department of solid waste management (DoSWM) has drafted a sub decree on plastic management.
<p>2.5 Extent to which a private sector engagement strategy is designed and implemented</p> <p>Measured on a three-point scale: 0= none 1= Moderate extent: Strategy is designed but not implemented 2= Great extent: Strategy is operationalized including an online platform and pilot initiative</p>		<p>Target: 1</p> <p>Result: 1- Achieved</p>	<p>Achieved as the target.</p> <ul style="list-style-type: none"> Private sector platform was officially launched
<p>2.6 Volume of financial resources mobilised to support proposed waste management measures, measured in USD</p>	0	<p>Target: US\$500K</p> <p>Result: Over 3 millions Over target</p>	<p>Achieved exceeding the target.</p> <ul style="list-style-type: none"> The US\$3,028,851 million Japan-funded Marine Plastics project (2021-2023) was approved to take up many of activities related to plastic management. Medical waste proposal with a total budget of US\$834,000 was also approved. A CLEAN proposal to focus on organic waste management with UNICEF was submitted
Output 3: Improved access to clean, affordable, and sustainable energy for the rural poor			

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
<p>3.1 Solar PV energy business models or new technologies developed to provide electricity, incl. for productive use Measured by number of business models/technologies</p>	0	<p>Target: 2</p> <p>Result: 1 technology for solar access; 1 business model and 4 business ideas selected – Over target</p>	<p>Achieved exceeding the target.</p> <ul style="list-style-type: none"> • Solar based DC microgrid equipped with Okra smart mesh-grid technology provided 24/7 clean energy to three villages in Kampong Chhnang province for productive appliances from refrigeration to electric cooking. Also demonstrated AC mini-grid in Pa Tang village in Ratanakiri Province. Overall, the project demonstrated both AC and DC mini-grids as potential options to electrify the remote off-grid communities. • The incubation programme selected 3 teams (Cricket House, Sunla, and GFC), and supported 63 jobs (both direct and indirect), including 47 women impacted by the project. <ul style="list-style-type: none"> ○ Cricket House used solar powered technology to raise micro-livestock to create alternative livelihoods for marginalised farmers whilst connecting them to local and global markets. ○ Sunla (Bong Snacks) used solar dryer technology to combat post-harvest income loss for rural farmers. ○ Green Farmer Community (GFC) used solar powered incubators for hatching eggs and environmentally friendly production techniques..
<p>3.2 Number of rural households benefit from solar PV system installed for access to energy incl. for productive use Measured by number households (male and female headed)</p>	0	<p>Target: 150</p> <p>Result:</p> <p>Household: 225 (Men: 1270/ Women: 344, 697) – over target</p>	<p>Achieved exceeding the target.</p> <ul style="list-style-type: none"> • The DC microgrid electrified 140 households (18 women headed households) with a total population of 12,45 (Male:707, female: 344) across three villages, Kampong Preah Kokir commune, Boribour District, Kampong Chhnang (https://goo.gl/maps/CRGP5VfSrS2hVtm37). Fifty-five (55) households in Ta Daok Village have been upgraded their energy package from below 750Wh/day usage category to 750 Wh/day because of increase in their electricity consumption by providing them with 600 W inverters including streetlighting. The system is under the management of an elected community committee. Okra, a company supporting the maintenance of smart grid, has been working closely with the committee members through local maintenance agents. • The average daily consumption has increased to almost 500Wh/day per household from around 250 Wh/day in December 2020. The households have started using more electric appliances for productive uses. For example, 48 households now use electric cookers, electric powered sewing machines, drills and power tools. • Based on the success from Stung Chrow, another solar-based AC mini-grid was replicated to provide electricity to a Jarai indigenous community (85 households with 341 people (168 females) in Pa Tang Village, Se San Commune, Ou Ya Dav District, Ratanakiri (https://goo.gl/maps/5jbAbRHJuzj6nmex9)

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
			<ul style="list-style-type: none"> Completed the installation of 32.64 kW solar off-grid system at Sre Ampil community, Teuk Pous District, Kampong Chhnang Province with newly procured off-grid inverters and battery storage (86.4kWh). When the transmission line is constructed, it will connect at least 60 households of this village. Location on google map https://goo.gl/maps/hPKkFPn3pjcHhkDq6 Installation of solar PV at Heng Samrin Chok High School benefiting 913 students (520 females) and 37 teachers (9 women).
3.3 Number of female headed households benefit from solar PV system installed for access to energy, water and productive use Measured by number of households (female headed only)	0	Target: 50 Result: 19 - Under target	Achieved below the target. <ul style="list-style-type: none"> This is the accumulated figure form the past: 19 female headed households to benefit from DC based micro-grid in Kampong Chhnang province. In Pa Tang village, Ratanakiri, 2 female headed HHs benefited from the mini-grid and 23 HH (out of 85) are poor HH. In both mini grids, a total of 362 (out of 707) and 168 (out of 341) women benefited from the Solar mini-grids in Stueng Chrow and Pa Tang, respectively..
3.4 Number of technicians with enhanced capacities to design, install and maintain solar PV as per installation standards/guidelines (to be prepared) Measured by number of male and female technicians	0	Target: 50 Result: 73 (21 females) - Achieved	Achieved exceeding the target. <ul style="list-style-type: none"> Two 2-day technical training workshops on System Design, Installation, and Maintenance of Solar Home System (SHS) were delivered in February and November to solar technology suppliers, MME's technical staff, provincial departments of energy, and communities. Total participants of both the trainings were 73 including 21 females. At the community, Okra as supplier and installer of microgrid trained one local youth community member on the maintenance and operation of the microgrid.
3.5 Number of community members with improved awareness on benefits of solar and appropriate use of solar technologies Measured by number of community members	0	Target: 60 Result: 95 (34 females) - Over target	Achieved exceeding the target. <ul style="list-style-type: none"> In 2020, two awareness workshops were provided to local communities in with a total participation of 95 persons including 34 females from the target communities for piloting solar energy access. Topics in workshop were solar home system, application of clean energy technologies in agriculture, solar technologies and demonstration of SHS.
3.6 Number of National quality standards/guidelines for solar PV technologies developed Measured by national quality	0	Target: 1 Result: 1 -	Achieved as the target. <ul style="list-style-type: none"> SHS guideline was finalized and approved by MME. The guideline was endorsed by waiting to be published due to the Covid February 20 event.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
standards/guidelines		Achieved	<ul style="list-style-type: none"> Energy efficiency design guideline is under development, led by GDE. The EE code is the design guideline for improving energy efficiency in building, that will be integrated in the building technical regulation being led by MLMUPC.
3.7 Studies and papers prepared to support RGC in evidence-based policy making towards a balanced, low-carbon intensive energy mix with a secure supply of power	0	Target: 4 Result: achieved; four policy briefs	<p>Achieved as the target.</p> <ul style="list-style-type: none"> As per the 2nd board meeting on 20th September 2019 indicator 3.7 was approved. Four policy briefs were completed and submitted to NCSD-MOE for internal circulation within the energy sector government bodies, i.e. MEF, MME, EAC, EDC. The topics are <ul style="list-style-type: none"> Responding to Cambodia's power sector challenges and role of sustainable energy Analysis and proposed adjustment of solar regulation Evaluation of the potential excess supply of power from existing solar rooftop system in Cambodia
3.8 Localized energy efficiency design guidelines developed (Yes/No)	NA	Target: Yes Result: Yes - Achieved	<p>Achieved as the target.</p> <ul style="list-style-type: none"> Energy Efficiency Design Guideline for Residential and Commercial Buildings was finalised. This guideline shall be integrated into Building Technical Regulation (BTR). The guideline proposed parameters and standard: <ul style="list-style-type: none"> Overall Thermal Transfer Value, <50W/m² Roof Thermal Transfer Value, <50W/m² Lighting Power Density, <12 to 18 W/m² (depending of building type) Air Conditioning, Ventilation.
3.9: Extent to which EE solutions in public buildings are designed and implemented Measured on a three-point scale: 0= None extent: No solutions designed 1= Full extent: EE solutions designed, proposed, and implemented	NA	Target: 1 Result: 1 - Achieved	<p>Achieved as the target.</p> <ul style="list-style-type: none"> Implemented energy efficiency measure of reducing solar heat gain at two Buildings of General Department of Energy.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
<p>3.10 Number of people with improved awareness on energy efficiency</p> <p>Measured by the number of people outreached by communication materials</p> <p>a. 2 Videos b. 1 Factsheets c. 1 exhibition d. 1 business talk e. 2 consultative workshops</p>	<p>a. 0 b. 0 c. 0 d. 0 e. 0</p>	<p>a. 500 b. 500 c. 50 d. 50 e. 100 - Achieved</p>	<p>Achieved as the target.</p> <ul style="list-style-type: none"> Two promotional videos were produced – one is on living with electricity from solar mini-grids (https://fb.watch/9pQKjKIIH/, 5,500 people watched this so far) and Energy Efficiency Practice (https://fb.watch/9pQNCaGXHq/, 1,100 people watched this so far); Since the two videos have covered the achievements to a detailed extent in both energy access and energy efficiency, the project did not see the additionality of Factsheets. Instead, used the funds for mini-grid establishment at Pa Tang. Because of COVID-19 community outbreak on 20 February, the project could not organize events such as exhibition, business talk and consultative workshop. Instead, the funds were used for establishing mini-grid at Pa Tang village.
<p>Cross-cutting activity: Project Management Over this reporting period, the following results include: The project board meeting was not conducted, instead the e-mail approval was carried out for budget revision version (G05).</p> <p>1) 11 March 2019: The first project board meeting was conducted chaired by H.E. Dr. Tin Ponlok, the General Secretariat of the NCS and the Project Director. The decision of the Board made as follows:</p> <ul style="list-style-type: none"> The Project Board and implementing partners agreed to approve the fund flow and workplan in principle, with the budget approval to be made via email. Project Board meeting and Inception Workshop was proposed for mid-June. The project team followed up on this proposal and this workshop was moved to be combined with the next board to be more efficient including reviewing budget, workplan, and project progress. <p>2) 20 September 2019: A second board meeting of 2019 was held. The Project Board and implementing partners agreed to approve the budget revisions as well as proposed changes to the Project Document</p> <ul style="list-style-type: none"> Changes include: <ul style="list-style-type: none"> Support piloting grass straws as an alternative to plastic straws this year Business challenges for organic composting and plastic recycling will be facilitated in 2020 rather than 2019 Reduce the number of targeted households to be reached with solar system(s) under output 3.1, reduction from 200 to 100 households. Also proposed changing the number of targeted female-headed households from 50 to 25. On request of MME, it was proposed to include: “Preparation of a guideline on solar home systems” in output 3.4. Part of budget from output 3.5 will be allocated to this activity. Unexpected power shortages during dry season 2019, increased interest in ways to mitigate shortages. More interest in “Economic Appraisal of the Potentials of Photovoltaic Solar Energy in Cambodia”-study and related policy work. The meeting was proposed to add an indicator 3.7 “Studies and papers prepared to support RGC in evidence-based policy making towards a balanced, low carbon intensive energy mix with a secure power supply. 			

f.

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
<p>Revision of Project Document and Budget. Several meetings were conducted between UNDP Project Team and Sweden to clarify the changes and rationality. All changes of target and budget reallocation written and agreed by Sweden and the Board. Final agreed budget is now used to track its progress as seen in the financial report Section below.</p> <p>Regular update and communication with Sweden agreed. To increase the transparency and efficiency, all Sweden funded projects are suggested to provide a regular donor update monthly. The joint project meeting with Sweden on 23 May 2019 at the Embassy of Sweden, agreed on the following points:</p> <ul style="list-style-type: none"> • Annual meeting (or twice a year depending on the project) • Documents to be shared 10 working days in advance • Quarterly report or meetings to update the progress at technical level • Technical level meeting prior to the board meeting • Changes in the budget should be documented with a summary of explanations • Budget revision with 10 % of tolerance can be done by manager. Beyond 10%, a board approval is needed via email or in person <p>3) 13 March 2020, chaired by H.E. Dr. Tin Ponlok, the General Secretariat of the NCS D and the Project Director. The decision of the Board made as follows:</p> <ul style="list-style-type: none"> • The Board and implementing partners agreed to approve the fund flow and workplan in principle, with the budget approval to be made via email. This followed by the e-mail approval in August, the board agreed the injection of additional fund for tree planting as a COVID response. • The project team followed up on this proposal and this workshop was moved to be combined with the next board to be more efficient including reviewing budget, workplan, and project progress. <p>The board approved the following:</p> <ul style="list-style-type: none"> • The annual progress report and the reporting of expenditure for 2019 • The revised budget and annual work plan for 2020 • Risk and strategy of the project <p>4) 18 December 2020: A virtual board meeting conducted, and the board approved the following:</p> <ul style="list-style-type: none"> • The annual progress report and the reporting of expected expenditure for 2020 • The budget extension and annual work plan for 2021 • Risk and strategy of the project <p>On budget reallocation</p> <ul style="list-style-type: none"> • Recognizing that the project needs to achieve tangible results as a final year and considering the situation with Covid-19 that larger meetings may be less frequent, the board suggested that the implementing departments of these activities review their budgets for possible re-allocation from meetings, workshops, and study tours to on the ground activities piloting PES, circular economy in Kep as models to be replicated (for example investment in waste 			

Output Indicators	Baseline (2018)	Target (2021)	Status (Achievements and Challenges)
			<p>collection and sorting facilities), and second village for solar PV based micro-grid.</p> <ul style="list-style-type: none"> • Larger re-allocations of budget should be submitted to the board in accordance with modalities in the project document agreement <p>5) The final board meeting was conducted via online approval. The board reviewed a package of documents and decided:</p> <ul style="list-style-type: none"> • Closed the project by 30 June 2021 • Endorsed the final evaluation report with management response. • Only cost associated with reporting, auditing, and evaluation can be spent after the project closure • Endorsed the asset transfer to responsible partners. <p>Project Monitoring and Evaluation</p> <ul style="list-style-type: none"> • At least two donor field missions were conducted to visit the progress of the project and discussed with challenges with beneficiary and key local actors. Tree planting, as a Covid socio-economic response was also featured for the last trip in February 2021. <p>The project evaluation report shows that the project delivered satisfactory development results and the likelihood for sustaining the solutions are relatively acceptable. Some good example of replication all outputs were also apparent, and plastic waste programming was successfully carried forward under project funded by the Government of Japan. The PES framework for Kulen and Kbaly Chhay is one of the winning models for biodiversity financing.</p>

Annex 2: RISK LOG

#	Description	Date	Type	Impact & Probability	Countermeasures / Management response	Owner	Submitted updated by	Last Update	Status
1	Progress of activities to be implemented by SEAC is very slow. SEAC has difficulties in appointing new board members and recruiting the required staff. If no progress achieved by end of 2019.	02 Dec 2019	Organizational	P=3 I=4	The contract with SEAC might need to be terminated and unused fund needs to be reimbursed.	UNDP Energy Team	Visal Veng	P=2 I=2	Implemented
2	Impact of the COVID-19 Pandemic	March 2020	Others	P=1 I=5	Repurposed project activities that were impacted by the pandemic - activities such as study tours, workshops etc.	UNDP Energy Team	Butchaiah Gadde	P=1 I=3	Implemented
3	Impact of community transmission of COVID-19 in Nov 20	The 4 Nov event	Others	P=1 I=5	As above and conduct small groups (<20 pax) and virtual meetings	UNDP, NCSD, NCDDS and MME	PMU	P=1 I=3	Implemented
4	Impact of community transmission of COVID-19 in 20 February 2021	20 Feb 2021	Operational	P=2 I=5	Repurposed plans among IPs and RPs conducted and board approve the plan	UNDP, NCSD, NCDDS and MME	UNDP/PMU	P=1 I=3	Implemented
5	Unspent budget up to 80% with NCSD RPs	April 2021	Operational	P=2 I=4	Split the NEX advance in two tranches and keep monitoring NCSD's RPs to report Q1 expenditure Prepare Note To File for CO	UNDP/PMU	UNDP	P=1 I=3	Implemented
6	Rainy season is coming in Ratanakiri, which could cause difficulty to access to village to install solar	April 2021	Operational	P=3 I=3	Speed up the procurement and implementation	UNDP Energy Team	Vuthy and Butchaiah	P=2 I=2	Implemented
7	Consultants for Energy code and piloting EE	April	Operational	P=3 I=2	More follow-ups with consultants	UNDP Energy	Vuthy, Butch and	P=2 I=2	Implemented

#	Description	Date	Type	Impact & Probability	Countermeasures / Management response	Owner	Submitted updated by	Last Update	Status
	measure could not deliver result					Team	Sarasy		
8	During first quarter of the year 2021, it was very dry which would lead to more newly planted trees die	Jan 2021	Operational	P=4 I= 3	IPs should apply watering to sites where is critical and replaced the dead planted trees with new seedlings	Tree planting partners	Kunka and IP's on tree plantings	P=3 I=2	Implemented
9	The planting site of 20 ha in Portrey commune, Pouk district is a place where about a hundred of cows usually feed. The tree-planting activity may result in economic displacement for local families if they have to shift grazing area.	May 2021	Operational	P=3 I= 3	Poutrey Commune Council to issue an Deka (by law) or an announcement to inform those cows' owners not to feed their cows in the new tree plantation and other areas of CPA land and the others are available for the feeding, and Issuing agreements between cows' owners and Poutrey communal chief	Tree planting partners	Kunka and IP's on tree plantings	P=3 I=3	Implemented
10	There is a risk that local citizens, especially marginalized group do not have the capacity to claim their right to complain the quality of the waste station operation and maintenance.	May 2021	Operational	P=4 I= 2	NCDDES and UNDP project team will instruct Kep municipality administration to assure that marginalized groups of citizens be informed during the SWM awareness raising on how citizen can complain to the waste collection service providers. Moreover, the role of citizen office of the municipality and all Sangkats' accountability mechanism has to take citizen concerns into consideration firmly, especially the waste collection service quality.	UNDP/NCD DS	Kunka	P=4 I=2	Implemented
11	There possibly is a risk that the waste depots	May 2021	Operational	P=4 I= 2	NCDDES and UNDP project team will inform to PDoE and Kep	UNDP/NCD DS	Kunka	P=4 I=2	Implemented

#	Description	Date	Type	Impact & Probability	Countermeasures / Management response	Owner	Submitted updated by	Last Update	Status
	would create conflicts among citizen living nearby the depots' location due to unproper maintenance of the depots' operation and potential bad smell				administration as below. PDoE will provide regular oversight to ensure that the depots are technically operated and maintained properly by the waste collection service providers. PDoE will provide technical advice to Kep municipality administration in its monthly meeting in order to strengthen the waste depot operation and maintenance.				

Annex 3: PROJECT IMPLEMENTATION ISSUES AND ACTIONS

Component	Issues	Action taken	By whom	By when	Status
1) NRM and PES	The revised workplan against COVID-19	<ul style="list-style-type: none"> Followed up and take action in accordingly and repurposed budget and workplan was reflected in October and notified the board 	PMU/NCSD	July-Nov 2020	Implemented
	The field monitoring/ donor visit to tree planting sites was planned to conduct for 23-26 February 2021 to Siem Reap and Pursat provinces. Because of the Covid-19 outbreak in the community (20 February Community Event), the visiting team could not finish and decided to finish the visit after completing activities on 24 February 2021.	<ul style="list-style-type: none"> Further monitoring to the rest of the tree plantations Keep close follow-up on the planting schedule of the flooded tree with an eye to ensure closure by project end date in June 2021 	BESD project team	30 March 2021	Implemented
			BESD project team	30 April 2021	Implemented
	PES Piloting should have more strong support from the ministerial level	<ul style="list-style-type: none"> DBD has submitted the proposed PES mechanism and fee collection options, and governance structure to the minister of environment Repurposed unimplementable fund from workshop/meetings to strategic media campaign in Kulen Host Technical Working Group (TWG) on biodiversity to seek inputs for PES roadmap, PES fund governance mechanism, and fee structure. 	Consultants and BESD project team	July 2020-May 2021	Implemented
The additional tree activities require more institutional arrangements outside the existing BESD project	<ul style="list-style-type: none"> Sought the BESD board members' endorsement of this virtually. Coordinated with newly engaged partners via other UNDP contact persons from the REDD Project. Transparently communicated with key implementing partner and mapping key implementation steps/solutions. LOA and grant agreement co-signed and extended for 2021 	PMU/NCSD Sony Oum, Sovanna Nhem, Leif Holmberg and Pinreak Sou	July 2020-May then 2021	Implemented	

Component	Issues	Action taken	By whom	By when	Status
2) Circular Economy	There was a delay in signing LOAs between NCSD and two departments: 1) Green Economy and 2) Solid Waste Management due to difficulties in creating bank sub-accounts and focal points for implementing the projects.	<ul style="list-style-type: none"> Conducted a series of meetings with the NCSD PMU and respective departments to speed up the process. Support the PMU with inter-department LOAs 	Sony Oum and Sreykhuoch Kim and NCSD PMU	Nov-Dec 2020	Implemented
	Delay in piloting municipal waste management in Kep by NCDD-S due to mainstream the plan into 3-rolling plan	<ul style="list-style-type: none"> Conducted follow-up meeting with NCDD-S team and revised the workplan to reflect the reality. 	Sony Oum and Sreykhuoch Kim and NCDD-S focal points	Nov 2020	Implemented
3) Solar Energy	Delay in the issuance of purchase order (PO) for selected vendor to implement solar micro-grid	<ul style="list-style-type: none"> Decoupled O&M of DC micro-grid so that PO could be issued soon 	Vuthy Va, Sarasy Chiphong (MME focal point)	June 2020	Implemented
	Delay in the advertisement of ITB for second village	<ul style="list-style-type: none"> Discuss with MME to finalise second village the soonest 	Vuthy Va, Sarasy Chiphong (MME focal point)	June 2020	Implemented
	Delay in the field level activities for implementation of solar mini-grid in Ratanakiri because of lockdowns and travel restrictions	<ul style="list-style-type: none"> MME/UNDP will issue letter(s) as required to permit travel of the contractor team to field to respond to a rapidly changing context of Covid-19 	Vuthy Va, Sarasy Chiphong (MME focal point)	May 2021	Implemented

Annex 4: COMMUNICATIONS, KNOWLEDGE MANAGEMENT AND VISIBILITY

The following communications results are listed below:

Knowledge Product Produced this year	Type	Date Published /Produced	Target audience (# people reached)	Link (if available)
The Cash for Work initiative	Awareness	22/05/21	Public (Reach: 1.5K, likes: 37)	https://www.facebook.com/UNDPCambodia/photos/4210654609001628/
Why Should we switch to Solar Energy?	Awareness	20/05/21	Public (Reach: 2.9K, likes: 77)	https://www.facebook.com/UNDPCambodia/photos/4206525039414585/
Celebrate the National Arbor Day	Awareness	30/04/21	Public (Reach: 2.4K, likes: 70)	https://www.facebook.com/UNDPCambodia/photos/4146596015407488/
Zero plastic lover (MDC student-led campaigns)	Awareness	3/01/21	Youth and the public (Reach: 4K, likes: 51)	https://www.facebook.com/watch/?v=696206357924403
Model primary school gardening	Awareness	11/01/21	Primary school children (Reach: 27.5K, likes: 346)	https://www.facebook.com/141301635936966/posts/3840579326009160/
A two-day consultative workshop on sub-decree for plastic management	Workshop	18/01/21	Public (Reach: 2.8K, likes: 75)	https://www.facebook.com/141301635936966/posts/3859370840796675/
Featuring MOE Under Secretary of State's quote for shifting toward circular economy	Awareness	18/01/21	Public (Reach: 3.2K, likes: 109)	https://www.facebook.com/141301635936966/posts/3859782977422128/
Featuring UNDP Policy Specialist, Climate Change and Environment's quote for shifting toward circular economy	Awareness	20/01/21	Public (Reach: 5.1K, likes: 165)	https://www.facebook.com/141301635936966/posts/3862594807140945/
Exchange visit to Battambang with NCCDS team to learn from municipal waste management and plastic recycling	Awareness	21/01/21	Public (Reach: 13.2K, likes: 233)	https://www.facebook.com/141301635936966/posts/3864944826905943/
Annual learning forum BESD Project 2020	Workshop	28/01/21	Project partners and public (Reach: 3.5K, likes: 114)	https://www.facebook.com/141301635936966/posts/3885023308231428/
Featuring lesson on Circular economy by UNDP DRR	Awareness	28/01/21	Project partners and public (Reach: 2.5K, likes: 89)	https://www.facebook.com/141301635936966/posts/3885025424897883/
Guest speaking session by featuring H.E. Dr. Hor Peng, Rector of the National University of Management on commitment for zero-plastic bottle building	Awareness	15/02/21	Project partners and public (Reach: 17.3K, likes: 152)	https://www.facebook.com/141301635936966/posts/3933473530053072/
Tried out session at Kampong Chhnang on Greener Thursday Programme with Ministry	Awareness	16/02/21	Youth, teachers and the public	https://www.facebook.com/141301635936966/posts/3935906776476414/

Knowledge Product Produced this year	Type	Date Published /Produced	Target audience (# people reached)	Link (if available)
of Education, Youth and Spots			(Reach: 4.2K, Likes: 153)	
Access to clear and productive power at Kampong Chhnang	Awareness	14/02/21	The public (Reach: 4.2K, Likes: 130)	https://www.facebook.com/UNDPCambodia/posts/3931125823621176
Featuring access solar energy at Kampong Chhang	Awareness	11/02/21	The public (Reach: 3.3K, Likes: 94)	https://www.facebook.com/UNDPCambodia/posts/3923231527743939
Conserving biodiversity reduce risk to future pandemic	Awareness	02/03/21	The public (Reach: 4.5K, Likes: 130)	https://www.facebook.com/UNDPCambodia/posts/3978749138858844
Plastic learning session	Awareness	05/03/21	The public (Reach: 2.6K, Likes: 80)	https://www.facebook.com/UNDPCambodia/posts/3984355288298229
Featuring plastic waste recycling in Battambang	Awareness	16/03/21	The public (Reach: 6.9K, Likes: 126)	https://www.facebook.com/UNDPCambodia/posts/4015053041895120
Plastic recycling	Awareness	18/03/21	The public (Reach: 2.6K, Likes: 50)	https://www.facebook.com/UNDPCambodia/posts/4018935024840255
Featuring business model on solar panel	Awareness	24/03/21	The public (Reach: 2.4K, Likes: 62)	https://www.facebook.com/UNDPCambodia/posts/4038383859562038
Re-five logo with fabric mask (led by DMC students)	Awareness	27/3/21	Youth and the public (Reach: 1,054)	https://www.facebook.com/ReFiveCambodia/posts/2084395077392390
Poster: About Covid19	Awareness	28/3/21	Youth and the public (Reach: 964)	https://www.facebook.com/ReFiveCambodia/posts/209152844334572
We are back poster	Awareness	29/3/21	Youth and the public (Reach: 7,541)	https://www.facebook.com/ReFiveCambodia/posts/209922487590941
Featuring productive use and solar	Awareness	30/3/21	Youth and the public (Reach: 2.5K, Likes: 62)	https://www.facebook.com/UNDPCambodia/posts/4056594777740946

In 2020, social and communication products produced in 2020, reaching over **352,000 people**.

Knowledge Product Produced this year	Type	Date Published /Produced	Target audience (# people reached)	Link (if available)
Plastic campaign page in Khmer as a sub-page under the MoE website	Awareness	January 2020	Public audience	https://www.moe.gov.kh/togetherreduceplastic
Site monitoring video	Awareness	January 2020	Donor and board	Soft copy is available
5 ways to reduce plastic	Awareness	2 Jan 2020	Public audience	https://www.facebook.com/UNDPCambodia/photo

Knowledge Product Produced this year	Type	Date Published/Produced	Target audience (# people reached)	Link (if available)
				s/a.144313525635777/2861740583893044/
Sweden visit Kulen National Park	Awareness	27 Feb 2020	As above (Reach: 7.5K)	https://www.facebook.com/UNDPCambodia/photos/pcb.2981880235212411/2981877691879332/
Solar water pump in Kulen as a livelihood option	Awareness	26 Feb 2020	As above (Reach: 3.1K)	https://www.facebook.com/UNDPCambodia/photos/a.144313525635777/2979025518831216/
The importance of Kulen ecosystem for fresh water in Siem Reap	Awareness	24 Feb 2020	As above (Reach: 7.3K)	https://www.facebook.com/UNDPCambodia/photos/a.144313525635777/2975678055832629/
BESD project pager	Awareness	March 2020	Public audience/partners	http://ncsd.moe.gov.kh/besd
3 rd Project Board Meeting	Other	13 Mar 2020	As above	https://ncsd.moe.gov.kh/dapf/news/3rd-board-meeting-building-enabling-environment-sustainable
Draft Circular Economy Strategy and Action Plan	Other		As above	A soft copy is available
The management of Kulen National Park video	Awareness	04 June 2020	As above (Reach: 54.5K)	https://www.facebook.com/UNDPCambodia/videos/2672020926411931/ https://www.facebook.com/UNDPCambodia/videos/2599298003684224
Financing biodiversity conservation options linking to PES	Awareness	21 May 2020	As above (Reach: 3K)	https://www.facebook.com/UNDPCambodia/photos/a.144313525635777/3179431568790609/
SHS leaflet	Awareness	August 2020	Public audience/equipment suppliers	Soft and hardcopies are available
Knai Bang Chatt Featuring CE in practice	Awareness	August 2020	Public audience	Soft copy is available
Video documentary on Solar Home System (SHS)	Awareness	September 2020	Public audience / equipment suppliers	Soft and hardcopies are available
Series Video 1: A DMC led video related to reducing the plastic at home and school was produced and published on RE-five Facebook page with sharing on DMC Facebook page on	Plastic campaign	24-Nov- 20	Youth audience (17.9K visitors and reach: 43.9K)	https://fb.watch/26Udmzu7Iq/
Guest Speaking Video: We invited Miss Sotheavy At, Founder of “Think Plastic” to share her experience about changing to plastic free lifestyle.	Plastic campaign	29-Nov-20	Public audience (11.7K viewers and reach: 23.7K)	Instagram: https://www.instagram.com/ReFiveCambodia/ YouTube: https://www.youtube.com/channel/UC-Xz16vTcfyejqwYwWykqg/ Facebook: https://web.facebook.com/ReFiveCambodia/

Knowledge Product Produced this year	Type	Date Published/Produced	Target audience (# people reached)	Link (if available)
				dia
Series videos 2: A video for reducing the plastic at work and public	Plastic campaign	6-Dec-20	Public audience (11.4K viewers and reach: 23K)	https://fb.watch/2ohgicQgi/
Urgent action is required to tackle marine plastic litter	Awareness	09-Dec-20	Public audience (Reach: 1.3K)	https://www.facebook.com/141301635936966/posts/3753112431422517/?d=n
Environment ministry sounds alarm over rising air pollution	FB Content	15-Dec-20	(Reach: 3.1K)	https://www.facebook.com/141301635936966/posts/3767745756625851/?d=n
25 articles have been received from the candidates	Essay	15-Dec-20		https://www.facebook.com/ReFiveCambodia/posts/125041226079068
How to make cloth face marks by DMC/RUPP students	Plastic campaign	15-Dec-20	Public audience (8.4K viewers and 21.9K reach)	https://fb.watch/2HQVX9TCfA/
Opportunity for Cambodia to set example of environmental sustainability	Awareness	17 Dec 2020	(2.4K)	https://www.facebook.com/141301635936966/posts/3772971339436626/?d=n
NUM to go plastic free from January	Plastic campaign	13-14 Dec 20	Public audience (Reach: 54.3K)	https://bit.ly/2JV3WmS Khmer Times https://www.facebook.com/141301635936966/posts/3765795766820850/?d=n https://www.facebook.com/141301635936966/posts/3767745756625851/?d=n
Cambodia faces plastic woes	Awareness	17 Dec 20	Public audience (6.7K)	https://bit.ly/3gUObrR The Phnom Penh Post
Providing supplies to informal waste pickers in Phnom Penh	Awareness	17 Dec 2020	Public audience (Reach: 5.9K)	https://www.facebook.com/141301635936966/posts/3773435679390192/?d=n
BESD summary result video	Awareness/knowledge sharing	17 December 2020	BoD and project partners	Soft copy is available
Informal waste pickers play a vital role in the recycling and circular economy in Cambodia	Awareness	21 Dec 2020	Public audience (Reach: 4.2K)	https://www.facebook.com/141301635936966/posts/3784027301664363/?d=n
Big water companies have been urged to make voluntary contributions or pay for commercial water use for sustainable ecosystem services (PES)	Awareness	20 Dec 20	Public audience (Reach: 2.4K)	https://www.facebook.com/141301635936966/posts/3784027301664363/?d=n

Knowledge Product Produced this year	Type	Date Published/Produced	Target audience (# people reached)	Link (if available)
Inauguration of DC Micro Grid in Steung Chrow Village, Kampong Chhnang Province	Awareness	21-22 Dec 20	Public audience (Reach: 12.9K)	https://www.facebook.com/141301635936966/posts/3784322071634886/?d=n https://www.facebook.com/141301635936966/posts/3784509974949429/?d=n https://www.facebook.com/141301635936966/posts/3788786451188448/?d=n
Kampong Chhnang villages powered by solar published in the Phnom Penh Post	Awareness	22 December 2020	Public audience	https://www.phnompenhpost.com/national/kampong-chhnang-villages-powered-solar
Village first to get 'smart-grid' in Kampong Chhnang province	Awareness	23 December 2020	Public audience	https://www.khmertimeskh.com/50796286/village-first-to-get-smart-grid-in-kampong-chhnang-province/
A series of three videos on RUPP youth-led plastic social media campaigns posted on	Campaign	Dec 2020	Youth ad public audience	Soft copies are available
Series videos 4: A video related Before and After plastic-free lifestyle	Plastic campaign	27-Dec-20	Public audience (8.4K viewer and reach: 21.9K)	https://fb.watch/2HR0xWmpFC/
Total views and reach				

Social media posted and communication products produced in 2019:

Knowledge Product Produced this Quarter	Type	Date Published/Produced	Target audience	Link (if available)
The project page is available in the UNDP website	Other	5/22/2019	Public audience/partners	http://www.kh.undp.org/content/cambodia/en/home/projects/creating-sustainable-cambodia.html
BESD 2-pager has drafted and being designed for reaching a wider range of audience.	Other	6/28/2019	Potential partners/stakeholders	A soft copy is available.
Plastic pager is drafted and being reviewed for final infographic design.	Other	6/30/2019	Potential stakeholders/partners	A soft copy is available.
The 5 Rs poster on Plastic reduction for MoE/NCSD drafted and being finalized	Other	6/30/2019	MoE and NCSD staff and the public	A soft copy is available.

Webpage content on plastic waste and its impacts for MoE was drafted	Website	6/28/2019	MoE and NCSD staff and the public	A soft copy is available.
Video production guidelines for youth-led plastic campaigns was developed	Training module/manual	6/30/2019	RUPP Students	A soft copy is available.
Facebook content and messaging on plastic campaign drafted	Other	6/14/2019	RUPP Clean and Green Team	A soft copy is available.
Final posters content to stick at cashier counters of Aeon and Lucky. The posters aim to raise public's awareness about negative impacts of plastic and ways to reduce plastic.	Poster	7/5/2019	Customers at supermarkets	A soft copy is available.
Booklet and brochure contents for plastic were drafted	Booklet and brochure	6/14/2019	Booklet for Pedagogy teachers and brochure for general public	A soft copy is available.
BESD board and cost sharing ceremony Press Release				A soft copy is available.
Mascot concept guideline was drafted.	Branding image	6/28/2019	General public	A soft copy is available.
Awareness Raising Material from Baramey Production (Music Video, Animation, Theme Song, Pledge)	Video	Between 11/6/2019 and 12/5/2019	General Public	https://www.facebook.com/barameyofficial/videos/2760874500623931/?_tn=kCH-R&eid=ARBPHc2y2qZtGolMDw8UXO-adJtyGLBsqgOgb- https://www.facebook.com/barameyofficial/videos/571280400316768/?_so=permalink&_rv=related_videos
4R Posters for general events and they are now used by Ministry of Education, Youth and Sport for public awareness raising.	Poster	11/20/2019	General Public	https://www.kh.undp.org/content/cambodia/en/home/projects/our-action-for-plastic-pollution-in-cambodia/what-we-re-doing-to-combat-plastic-0.html
TV Commercial on the impact of plastic and its alternatives,	TV Commercial	11/12/2019	General Public	https://www.youtube.com/watch?v=FAerIdp7v9c&feature=youtu.be
Policy Regulation Reports	Report	12/13/2019	MoE and NCSD Staff	https://www.kh.undp.org/content/cambodia/en/home/projects/our-action-for-plastic-pollution-in-cambodia/what-we-re-doing-to-combat-plastic-0.html

You-led plastic competition	Videos	11/30/2019	RUPP Clean and Green Team	Soft copies are available.
BESD annual result was projected at the learning event in December.	Video	12/26/2019	NCSD/UNDP	A soft copy is available.
Post-event Vox pop video was produced about their participation perspectives to act after the annual learning forum.	Video	12/31/2019	UNDP	A soft copy is available.

<p>Was the project cited/quoted/featured in media reports/articles? If yes, please provide link to article/video.</p>	<p>Some articles published in 2021 by news agents:</p> <ul style="list-style-type: none"> • Plastic recycling in Battambang, published in ThmeyThmey • Battambang city as a role model for municipal waste management, published at Phnom Penh Post and Khmer newspaper, Reaksmei Kampuchea • POWER TO THE PEOPLE: How Cambodia's remote villages are leapfrogging up the energy ladder. Published by UNDP on February 11, 2021. • Battery Power Sharing: The Pod now enables transmission of underutilized battery power to wherever it's most needed at night. Published by Okra on May 17, 2021. • Using Mesh-Grids to energize rural Cambodia. A case study: The Cambodian Government is piloting innovative approaches to sustainably electrify last-mile areas. Published by Okra on 14 May 2021 • DMC project aims to reduce plastic https://www.phnompenhpost.com/national/dmc-project-aims-reduce-plastic. Published on 20 May 2021 <p>Some articles published in 2020:</p> <ol style="list-style-type: none"> 1. Cambodia: A man's journey to reduce plastic waste by turning it into diesel. Published in Asia News on February 19, 2020. 2. Waste remains a challenge for Phnom Penh City (03/02/2020) https://www.rfi.fr/km/cambodia/chrono-03-02-2020 3. Solving Cambodia's Plastic Problem Seen as Key to Minimizing Waste. Published on VOA on 28 May 2020. https://khmer.voanews.com/a/solving-cambodias-plastic-problem-seen-as-key-to-minimizing-waste/5395699.html 4. Cambodia accelerates fight against single-use plastics. Published in Cambodian news on 05 April 2020. https://cambodianess.com/article/cambodia-accelerates-fight-against-single-use-plastics 5. Cambodia Starbucks Ends Plastic Straw Use. Published in https://cne.wtf/2020/01/31/cambodia-starbucks-ends-plastic-straw-use-on-31-Jan-2020. 6. Lessons from 2020: time for a circular economy. Published in Asian Times. https://asiatimes.com/2020/11/lessons-from-2020-time-for-a-circular-economy/ 7. Lessons from 2020: time for a circular economy in Khmer. Published in ThmeyThmey https://www.thmeythmey.com/?page=detail&id=97451 8. <u>The following articles were published various media agencies to raise public awareness on PES at Kulen National Park between 19 and 21 December 2020:</u> <ol style="list-style-type: none"> a) Khmer Times <ul style="list-style-type: none"> ○ 1st story: Stern action against illegal harvesting of wild orchids. https://www.khmertimeskh.com/50795919/stern-action-against-illegal-harvesting-of-wild-orchids/ ○ 2nd story: Big water companies urged to contribute to ecosystem services.
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<https://www.khmertimeskh.com/50795454/big-water-companies-urged-to-contribute-to-ecosystem-services/>

b) Fresh News (in Khmer)

- MOE led over 20 news agents to better understand PES at Kulen National Park.
<http://www.freshnewsasia.com/index.php/en/localnews/180711-2020-12-18-04-25-45.html>
- MoE to take legal measures to any individual who illegal trade wild orchids or endangered wildlife for export.
<http://www.freshnewsasia.com/index.php/en/localnews/180926-2020-12-21-02-28-06.html>
- MoE calls for commercial water users from Kulen to fund PES to protect ecosystems that Kulen offers.
<http://www.freshnewsasia.com/index.php/en/localnews/180927-2020-12-21-02-37-38.html>
- Phnom Kulen is priceless heritage reservoir. <http://www.freshnewsasia.com/index.php/en/localnews/180966-2020-12-21-06-15-57.html>
- MoE to create seek back for wild orchid and other plants from extinction.
<http://www.freshnewsasia.com/index.php/en/localnews/180978-2020-12-21-07-54-41.html>

c) Phnom Penh Post (in English)

- 1st story : Endangered status muller for Wild Orchids. <https://m.phnompenhpost.com/national/endangered-status-muller-kesor-kol>
- 2nd story: Pilot ecosystem initiative to draw funds from Kulen water use.
<https://www.phnompenhpost.com/national/pilot-ecosystem-initiative-draw-funds-kulen-water-use>
- <https://www.facebook.com/109376125795581/posts/3604358662963959/>
- <https://www.facebook.com/109376125795581/posts/3602039549862537/>

d) VAYO FM Radio

- 1st story: MoE: Should voluntary donation or PES on water usage participate in ecosystem protection.
<https://vayofm.com/news/detail/106450-597391933.html>
- 2nd story: Researcher has been recording wild orchids that exists in nature (in Khmer version).
<https://vayofm.com/news/detail/106459-251474423.html>
- 3rd story: – 20 new reporters conduct a visit to understand about PES (in Khmer).
<https://vayofm.com/news/detail/106419-343357031.html>

e) Khmer Independence

- MoE calls for commercial water users from Kulen to fund PES to protect ecosystems that Kulen offers (in Khmer). <https://www.khi-newsdaily.com/detail/409854.html>

f) AMS

- <https://ams.com.kh/central/?p=214347>

g) AKP (in Khmer)

- <https://www.information.gov.kh/detail/536369>
- <https://akp.gov.kh/kh/post/detail/223880>

- <https://akp.gov.kh/kh/post/detail/223958>

h) Bayong TV (BTV)

- <http://btv.com.kh/?p=106368&fbclid=IwAR0SxdjiEBrVfclUjEyLWzVnRR32GTdTviBLRnj9yLYuXQIf1Ds3Nhn9nmg>

i) Apsara TV

- <https://www.facebook.com/amstv11/videos/410671417037778>
- <https://ams.com.kh/central/detail/216867>
- https://l.facebook.com/l.php?u=https%3A%2F%2Fams.com.kh%2Fcentral%2F%3Fp%3D214267&h=AT2S4_vxjdyN1BtzsU8v4LUpGLJFS5wJffMXH6Ttei1eljjfPbGg6MFHlf-5aGL9WjaiPrjPboDDpIoEQpwolYfOKEBRRbhrAyOiZaoPIguUz5iqElfBQA0qHP8BVP3gHp870_6cCiQzFrm1ypGicHhWRFWl4DddQtC0Ra_WyUyts00IwjH4yBKT72l8x0
- <https://www.facebook.com/amstv11/videos/400697681026693/?vh=e&d=n>

j) TVK

- https://youtu.be/OJsLoUz_8bU
- <https://www.youtube.com/watch?v=RVVbpVd9XIA&feature=youtu.be>
- https://www.youtube.com/watch?v=OJsLoUz_8bU
- https://m.facebook.com/story.php?story_fbid=224980725759331&id=518400675179292
- <https://www.facebook.com/tvkchannel7/videos/236623324730607/>

k) CTV8

- <https://youtu.be/WyCSqOztzo8>

9. Village first to get 'smart-grid' in Kampong Chhnang province

- <https://www.khmertimeskh.com/50796286/village-first-to-get-smart-grid-in-kampong-chhnang-province/>

10. Kampong Chhnang village powered by solar

<https://www.phnompenhpost.com/national/kampong-chhnang-villages-powered-solar>

In 2019, Three news articles published our work relating to Cambodia's commitment to the circular economy as the following:

1. [Business Time](#) "Cambodia Is Taking Big Steps in Adopting A Circular Economy"
2. [Bangkok Post](#), "Cambodia puts circular economy in motion"
3. [Khmer Time](#), "Youth urged to curb plastic use"

Four news articles published our work relating to the National Forum on Actions Against Plastic and waster festival rubbish campaign.

	<ol style="list-style-type: none">1. The Khmer Times Call for more action to reduce plastic waste2. The Phnom Penh Post Gov't set to act on plastic waste3. Xinhua News Cambodia calls for more action to reduce plastic waste4. The Ministry of Information More Action Should Be Taken Against Plastic Waste5. Khmer time English Water Festival rubbish collectors thanked for work6. Khmer time English Water Festival concert to promote clean environment <p>Radio news published on food festival regarding plastic reduction Kon Slab Phrea held on 23-24 Nov 2019</p> <ol style="list-style-type: none">1. Lotus Radio Khmer Love for the food, click here.2. Expression Hub Khmer Food, click here.
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Sovanna CHI

From: Magnus André <magnus.andre@gov.se>
Sent: Friday, December 17, 2021 4:13 PM
To: Moeko Saito Jensen
Cc: Camilla Ottosson; Sony Oum; Nimnuon IvEk; Ratana Norng; Rany Pen
Subject: Sv: A revised BESD terminal project report for your review

Dear Moeko,

Many thanks sharing the report and for considering my earlier comments. I'm happy with the report and have no further question or comments. The final report is hereby approved and the only outstanding reporting is now the final financial report that we look forward to receiving next year as per the agreement. **I note that the estimated remaining funds are below the USD 10,000 thread hold and that we don't plan for receiving any repayment**, although this will be finally settled with the certified financial report.

I would also like to thank you and your team for great collaboration during the implementation of this project. A special thanks goes to Sony for his dedication and availability. Both Samuel and I benefited greatly from his insights during the field trip that was unfortunately cut short due to the pandemic.

I wish you the all success with taken the innovative results from the BESD project further in your future work in this important sector.

Best regards,
/MA

Från: Moeko Saito Jensen <moeko.saito-jensen@undp.org>
Skickat: den 7 december 2021 16:12
Till: Magnus André <magnus.andre@gov.se>
Kopia: Camilla Ottosson <camilla.ottosson@gov.se>; Sony Oum <sony.oum@undp.org>; Nimnuon IvEk <nimnuon.ivek@undp.org>; Ratana Norng <ratana.norng@undp.org>; Rany Pen <rany.pen@undp.org>
Ämne: Re: A revised BESD terminal project report for your review

Dear Magnus

Thank you for your notification. No problem at all. Please kindly be informed that I will be on leave from the 20th December.

In case any further information is needed beyond the date, I will request the project team's help.

Have a safe trip back to Sweden.

Best regards
Moeko

From: Magnus André <magnus.andre@gov.se>
Date: Tuesday, 7 December 2021 at 16:08
To: Moeko Saito Jensen <moeko.saito-jensen@undp.org>
Cc: Camilla Ottosson <camilla.ottosson@gov.se>, Sony Oum <sony.oum@undp.org>, Nimnuon IvEk <nimnuon.ivek@undp.org>, Ratana Norng <ratana.norng@undp.org>, Rany Pen <rany.pen@undp.org>
Subject: Sv: A revised BESD terminal project report for your review

Dear Moeko,

Apologies for the belated response. I was planning to provide feedback on the report before going back to Sweden tonight but in the end I didn't have the time. I will work remotely during next week and send you our comments then.

Best regards,
/MA

Från: Moeko Saito Jensen <moeko.saito-jensen@undp.org>

Skickat: den 30 november 2021 17:44

Till: Magnus André <magnus.andre@gov.se>

Kopia: Camilla Ottosson <camilla.ottosson@gov.se>; Sony Oum <sony.oum@undp.org>; Nimnuon IvEk <nimnuon.ivek@undp.org>; Ratana Norng <ratana.norng@undp.org>; Rany Pen <rany.pen@undp.org>

Ämne: A revised BESD terminal project report for your review

Dear Magnus

Enclosed please find a revised BESD terminal report for your review.

For this version, we sought to address your comments for the report to be more analytical and narrative. Sony also made revisions in response to all your comments in the results framework.

I hope that this version has addressed your comments satisfactorily. Otherwise, please feel free to let us know. We stand ready to address any additional comments and questions.

We look forward to receiving your feedback.

Kind regards
Moeko

Certificate Of Completion

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Document Pages: 108	Signatures: 1
Certificate Pages: 2	Initials: 2
AutoNav: Enabled	Envelope Originator:
Enveloped Stamping: Enabled	Sovanna Chi
Time Zone: (UTC+07:00) Bangkok, Hanoi, Jakarta	One United Nations Plaza
	New York, NY 10017
	Sovanna.Chi@undp.org
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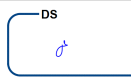
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Signer Events

Nimnuon IvEk
 nimnuon.ivek@undp.org
 Assistant Resident Representative - Policy & Innovations
 UNDP Cambodia
 Security Level: Email, Account Authentication (None)
Electronic Record and Signature Disclosure:
 Not Offered via DocuSign

Signature

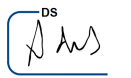


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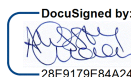
Sonali Dayaratne
 sonali.dayaratne@undp.org
 Deputy Resident Representative
 UNDP Cambodia
 Security Level: Email, Account Authentication (None)
Electronic Record and Signature Disclosure:
 Not Offered via DocuSign



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Alissar Chaker
 alissar.chaker@undp.org
 Deputy Resident Representative
 UNDP
 Security Level: Email, Account Authentication (None)
Electronic Record and Signature Disclosure:
 Not Offered via DocuSign



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Editor Delivery Events

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Agent Delivery Events

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Intermediary Delivery Events

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Certified Delivery Events

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Carbon Copy Events

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Carbon Copy Events	Status	Timestamp
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Completed	Security Checked	3/28/2022 4:28:44 PM

Payment Events	Status	Timestamps
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