

# 4- Proposed Innovation

## 1- Energy Efficient System



SMART RMS

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# PROJECT SUMMARY

## Building Back a Climate-Friendly and Inclusive Tourism Sector in Cambodia

### Background and Rationale

Cambodia's tourism industry—representing roughly a fifth of national GDP before COVID-19—was among the hardest hit by the pandemic. The sharp decline in tourist arrivals severely affected hotel operations, community-based eco-tourism (CBET) enterprises, and thousands of livelihoods, especially women working in the sector. At the same time, tourism's heavy reliance on fossil-fuel-based electricity and outdated cooling technologies made it a major contributor to carbon emissions and operating costs. Recognizing these twin challenges, WWF-Cambodia launched the Cool & Solar Project to “build back better” by demonstrating that clean, efficient energy can both lower costs and make tourism more sustainable.



### OBJECTIVE:

The project aimed to catalyse Cambodia's energy transition in the tourism sector through four complementary outcomes:

- 01 Demonstration:**  
 Pilot rooftop solar PV and efficient cooling solutions in hotels, eco-resorts, and CBET sites.
- 02 Capacity Building:**  
 Train solar professionals, hotel staff, and CBET members—at least 50 percent women—on renewable energy, energy management, and entrepreneurship.
- 03 Policy Reform:**  
 Advocate for improved regulations and incentives supporting solar and energy efficiency.
- 04 Awareness and Replication:**  
 Inspire adoption by showcasing success stories across tourism, finance, and energy stakeholders.

# IMPLEMENTATION JOURNEY

## Phase 1

### Inception and Launch (Jan–Dec 2022)

The project officially commenced in July 2022 following the signing of the WWF Switzerland–WWF Cambodia agreement. Early activities included stakeholder consultations with the Ministry of Mines and Energy (MME), the Ministry of Tourism (MoT), CTF, and CEPA; selection of pilot provinces (Phnom Penh, Siem Reap, Kratie, Stung Treng); and initial feasibility assessments for both hotel and CBET solar sites.

## Phase 3

### Efficiency and Innovation (Jan–Dec 2024)

In 2024, the project focused on energy efficiency and innovation. Five hotels underwent detailed cooling audits revealing potential annual savings up to USD 100,000 per property. The public report “Keep Guests Cool, Save Money, Help the Planet” was published. The Innovative Cooling Challenge launched in September 2024 recognized three winning hotels. EAC adopted revised rooftop solar regulations lowering tariffs and exempting small systems (<10kWp). Outreach videos and influencer trips reached over 80,000 viewers nationally. WWF collaborated with Swisscontact and Don Bosco TVET to embed solar courses in training programs.

## Phase 2

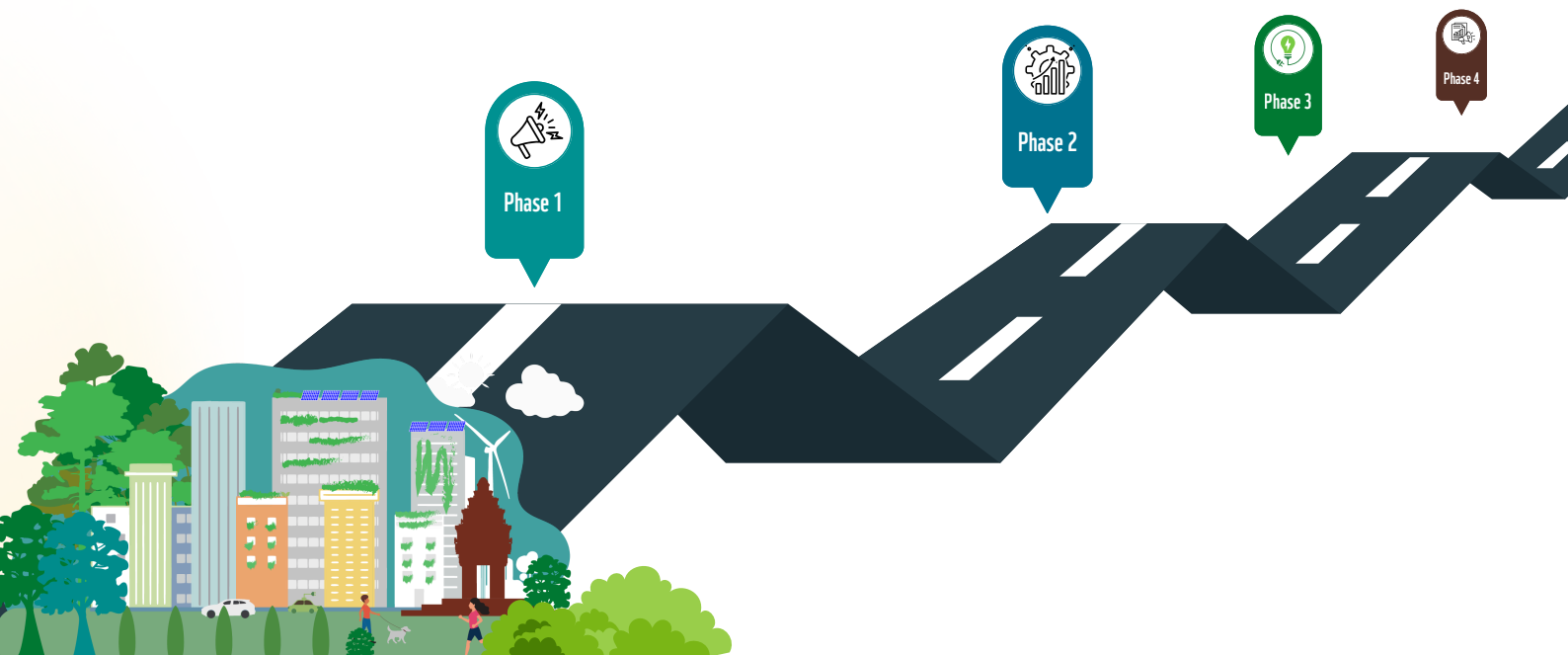
### Implementation and Capacity Building (Jan–Dec 2023)

2023 marked the transition from planning to tangible results. Three CBETs—Koh Han, Phnom Chumroksat, and Koh Prumcharey—were solarized, bringing reliable renewable power to community visitor centres. More than 70 community members, half of them women, received O&M training. 26 engineers completed advanced solar design training, and six hotels participated in the Cambodia Energy Efficiency Competition (CEE Comp.). WWF initiated rooftop solar policy dialogue with EAC.

## Phase 4

### Dissemination and Handover (Jan–Jun 2025)

The final semester consolidated achievements. WWF presented hotel audit results, launched the Standard Operating Procedure for energy efficiency in Siem Reap, and partnered with CAPRED and ABC on ESCO financing models. An independent evaluation confirmed strong delivery on all outcomes.



# KEY RESULTS AND ACHIEVEMENTS

## Category

## Result Highlights

### Clean Energy Access



3 CBETs solarized in the Mekong Flooded Forest providing reliable electricity for tourism facilities.



**3 CBETs**

solarized in the MFF, providing reliable electricity for tourism facilities.

### Energy Efficiency in Hotels



14 solar feasibility studies and 5 cooling audits completed; total potential savings over USD 1 million.



total potential savings

**1 USD million.**

### Capacity Development



257 individuals trained (73 women); including solar technicians, hotel staff, and community members.

**257 individuals trained**

**73**

**women** including solar technicians, hotel staff, and community members.

### Policy Impact



EAC rooftop solar regulation revised (Dec 2024) with lower tariffs and system exemptions under 10kWp.



EAC rooftop solar regulation revised, with lower tariffs and system exemptions under

**10kWp**

### Public Engagement



Over 80,000 people reached through videos, influencer campaigns, and national media.



Over

**80,000**

people reached through videos, influencer campaigns, and national media.

### Partnerships & Finance



CAPRED and ESCO financing platforms established; strengthened cooperation with CTF, MME, Swisscontact, and TVET schools.

# LESSONS AND OUTLOOK

The Cool & Solar Project demonstrated that Cambodia’s tourism sector can simultaneously reduce energy costs, cut emissions, and strengthen community livelihoods. Key lessons include:



**1 Efficiency First:**  
When rooftop solar faces regulatory barriers, focusing on efficient cooling offers immediate, replicable gains.

**2 Partnership is Key:**  
Collaboration among hotels, financial institutions, and development partners creates an enabling environment for market transformation.



**3 Women Drive Sustainability:**  
Women’s leadership in technical and management roles ensures long-term behavioural change and sustainability.



WWF-Cambodia will continue supporting national efforts to scale energy efficiency and renewable energy adoption through collaboration with CAPRED, MME, and CTF. The project serves as a model for Cambodia’s transition toward a low-carbon, inclusive tourism economy.

## CONCLUSION



From remote eco-tourism islands powered by the sun to five-star hotels optimizing cooling systems, the Cool & Solar Project has charted a path toward a cleaner, more competitive tourism industry. It bridges conservation with innovation—showing that sustainability is not a cost but an investment in Cambodia’s future prosperity.

Thank you to our donor and project partners for their support of Building Back a Climate-Friendly and Inclusive Tourism Sector in Cambodia :

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