**QUARTER PROGRESS REPORT[1]**
**QUARTER Q4 YEAR 2025**

## A. BASIC INFORMATION

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|---|---|---|---|
| **Quantum Project ID** | **01004069** | **Reporting Date**: | **01/19/2026** |
| **Full Title**: | **Smart Health Systems Zambia (formerly Solar for Health Strengthening Health Sector Service Delivery)** | | |
| **Start Date:** | **01/04/2025** | **Completion Date** (and approved extension, if any)**:** | **31/12/2026** |
| **Total Project Fund** (and fund revisions, if any)**:** | USD 8,902,667.50 | **Annual Project Fund: AWP Budget (2025)** | USD 8,902,667.50 |
| **Implementing Partner:** | **UNDP** | | |
| **Donor/s:** | **MOH / GF** | | |
| **Responsible Parties:** | **MOH** | | |
| **Project Description** | Zambia is grappling with a severe energy crisis due to prolonged droughts that have drastically reduced hydroelectric power generation, resulting in widespread load shedding—up to 17 hours daily in some areas. This has critically disrupted healthcare delivery, particularly in rural and underserved communities.<br><br>The Solar for Health project, implemented under an 18-month Project Initiation Plan (PIP), is a collaborative effort supported by the Global Fund, the Government of Zambia, UNDP, and private sector partners. The initiative aims to install solar photovoltaic (PV) systems as well as low orbit satellite internet in over 400 rural health facilities to ensure reliable, sustainable electricity for essential services such as emergency care, maternal and child health, vaccine storage, and diagnostics. IoT sensors will be piloted in a subset of 8 model sites to demonstrate and test innovative smart health facility approaches.<br><br>This intervention is a strategic response to strengthen Zambia's health system by delivering clean energy solutions that ensure **access**, improve **quality**, and build **resilience** of health services, especially in underserved areas. It lays the groundwork for scaling Smart Health Systems by integrating **solar energy, digital connectivity, smart facility design, sustainability planning, and innovative financing** as core deliverables. Together these support Zambia's universal electricity access by 2030, climate adaptation, and the SDGs (3, 5, 7, 9, 13, 17).<br><br>**Expected Outputs**<br><br>**1. Installation of Solar PV Systems in 426 Health Facilities**<br><br>Solar systems will be installed in 238 health posts, 113 rural and 7 urban health centres, 25 hospitals and 3 medical warehouses rural health facilities to ensure uninterrupted power supply, enhancing the reliability of medical equipment and vaccine cold chain storage. This will reduce dependence on costly and polluting fossil fuel generators. The project scope was updated in Q3 to include solarization of 3 ZAMMSA | | |

[1] UNDP CO Template for project Quarterly Progress Reporting, Updated as of January 2024

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| | warehouses, bringing the total number of sites to 426 which will strengthen national medical supply chain resilience and improve storage conditions for essential medicines.<br><br>**2. Strengthening Healthcare Service Delivery**<br><br>Reliable electricity will improve maternal and neonatal care, emergency response, and diagnostic services in rural health facilities. Continuous power availability will support critical units such as laboratories and intensive care. The project scope was expanded in Q3 to include installation and a one-year subscription for low orbit satellite internet (Starlink) at all target health facilities in partnership with Smart Zambia Institute, significantly enhancing digital connectivity for telemedicine, data reporting, and real-time coordination.<br><br>Additionally, a pilot at a subset of 8 model sites will leverage reliable power and connectivity to demonstrate the use case for IoT sensors in strengthening health service delivery, enabling predictive maintenance and improved patient monitoring. In Q4, a complementary initiative was introduced in partnership with the Government of India to pilot eVIN, an alternative open-source and scalable medicine tracking system, with ZAMMSA and MOH in two districts, supported technically by SZI. This addition will improve supply chain visibility and reduce stock-outs, ensuring that the benefits of reliable power and connectivity extend to medicine availability and overall health system resilience.<br><br>**3. Capacity Building and Technical Training**<br><br>Healthcare staff and technicians will be trained in the operation and maintenance of solar PV systems and satellite internet infrastructure, supported by technical guidelines and SOPs. A national technical support network will be established to ensure long-term system sustainability.<br><br>**4. Reduction of Operational Costs and Environmental Impact**<br><br>The use of solar energy will lower operational costs and reduce carbon emissions, contributing to Zambia's climate change mitigation efforts. It will also decrease reliance on the unstable national grid.<br><br>**5. Integration of Solar Energy in National Health Policies**<br><br>The project will support the Ministry of Health in developing policies for sustainable energy use in healthcare and promote public-private partnerships for system maintenance. It will also advocate increased investment in renewable energy for health facilities.<br><br>**6. Financial Sustainability**<br><br>A PPP model will be developed to attract long-term investment, alongside a carbon credit certification process to generate additional funding. A financial sustainability framework and community engagement strategy will ensure continued operation and expansion of solar infrastructure. |

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| **Target Group** | Levels<br>☒National<br>☐Regional<br>☒Sub-National (Provincial/ District.)<br>☒Community/Sectoral Groups | Shocks and Fragility<br>☐Internally displace persons<br>☐Migrants<br>☒Persons directly affected by natural disasters<br>☐Persons negatively affected by armed conflict or violence<br>☒Refugees | Socio-Economic<br>☒People living in multi-dimensional poverty<br>☒People living under the national poverty line<br>☒People living in Geographically Isolated and Disadvantaged Areas (GIDA)<br>☒Unemployed persons | Status<br>☒Key populations for HIV, tuberculosis, and malaria<br>☐Minorities (race, ethnicity, linguistic, religions, etc.)<br>☒Persons with disabilities<br>☐Sexual and gender orientation<br>☒Women<br>☒Youth<br>☐Indigenous People |
| **Gender Marker** | ☐Gen 0 No noticeable contribution to gender equality | ☐Gen 1 Some contribution to gender equality | ☒Gen 2 Gender equality as a significant objective<br>**Insert Link to GAP** | ☐Gen 3 Gender equality as a principal objective<br>**Insert Link to GAP** |
| **Contributing to Directions of Change** | ☒*Structural transformation*<br>***Structural transformation accelerated, particularly green, inclusive, and digital transition*** | ☒*Gender and Leaving no-one behind*<br>***No-one left behind, centering on equitable access to opportunities and a rights-based approach to human agency and human development*** | ☒*Building resilience*<br>**Resilience built to respond to systemic uncertainty and risk** | |
| **Adopting the Development Enablers** | ☒*Strategic Innovation*<br>***Empowering governments and communities to enhance the performance of entire systems, making them adaptive and resilient*** | ☒*Digitalization*<br>***Supporting countries to build inclusive, ethical, and sustainable digital societies*** | ☐*Development Financing*<br>***Partnering with governments and the private sector and other partners to align public finance and private capital flows with the SDGs and mobilize finance at scale*** | |
| **Contributing to Moonshots** | ☐Helping 100 million people to escape out of multidimensional poverty | ☒Supporting 500 million people to gain access to clean energy, | ☐Supporting 800 million people to participate in elections, many for the first time | ☐Promoting over US$1 trillion of public expenditure and private capital investment in the SDGs. |
| **2023-2027 CPD Outcome alignment** | By 2027, ecosystems are healthier, and more people, including the marginalized and vulnerable, are more resilient, contribute to and benefit from the sustainable management and use of natural resources and environmental services, and more effective respons | | | |

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|---|---|
| **B.2 CPD Output indicator alignment**<br><br>*[Choose between 1-3 applicable indicators]* | *Indicator 1.2.2.: Number of people in rural areas with access to renewable energy solutions*<br><br>*Indicator 3.1.1.: Number of strategies and policies developed to enhance digital transformation in public service delivery*<br><br>*2.2.2 Number of public and private entities making investments in low emission solutions and schemes through UNDP support [IRRF 2.5.1.1]* |
| **SDG Target Tagging** | **SDG 3, 5, 7, 9, 13 & 17** |

## B. PROGRESS REVIEW

CPD 2023-2027 indicator tracking 2024.xlsx

**Status of Output Indicators**[2]

| Expected output | Project Output Indicator | Accomplishment for the Reporting Period | | Links to Evidence |
|---|---|---|---|---|
| | | Quarter Target | Quarter Result | |
| Output 1: Installation of Solar PV Systems in 400 Health Facilities | Number of health facilities equipped with operational solar PV systems | **Health facility solarization:** Dispatch solar equipment for all provinces; complete installation at **8** model sites to demonstrate the standard approach and enable scale-up planning.<br><br>**ZAMMSA warehouse solarization (3 warehouses):** Hold kick-off; complete detailed design; initiate procurement for the turnkey solution to | **Health facility solarization:** Solar equipment dispatched from supplier to **Copperbelt, Northwestern, Eastern, and Southern** Provinces, positioning Q1 installations; installation **commenced** at **8** model sites (to be completed in Q1 2026), establishing field implementation readiness; technical assessments completed at **37** Lusaka and Central Province facilities to refine site-specific designs and reduce implementation risk.<br><br>**ZAMMSA warehouse solarization (3 warehouses):** Kick-off held; detailed design completed; contractor **placed purchase orders for major components** for the turnover-key solution, advancing delivery readiness for resilient warehouse operations. | Purchase Orders for Output 1<br><br>Q3: PO_10447897 to ASACO |

[2] Ensure Consistency with ProDoc and AWP indicators

| Expected output | Project Output Indicator | Accomplishment for the Reporting Period | | Links to Evidence |
|---|---|---|---|---|
| | | Quarter Target | Quarter Result | |
| | | strengthen continuity of warehouse operations.<br><br>**Connectivity:** Sign LOA with SZI; procure Starlink kits + subscriptions; procure installation services to enable activation and commissioning.<br><br>**Capacity building:** Deliver National ToT and train **20** Provincial ICT Officers to support implementation oversight and sustainability.<br><br>**Sustainability:** Draft sustainability framework and initiate consultations to define O&M and handover arrangements. | **Connectivity:** LOA signed with SZI; **751** Starlink kits + subscriptions procured (including **250 kits donated to GRZ by SpaceX via Starlink**), securing core connectivity inputs; installation procurement progressed through an **RFQ (launched and closed)** and was then transitioned to an **EOI to broaden the pool of qualified vendors**, with a follow-on RFQ planned in Q1—strengthening competition and value for money (limited competition in the initial RFQ). Subscriptions will be activated after installation.<br><br>**Capacity building:** National ToT delivered; **20** Provincial ICT Officers trained; **6** project team members completed KGRTC online training (Solar Design/Installation/O&M), strengthening technical oversight and sustainability readiness.<br><br>**Sustainability:** Framework development initiated; consultations scheduled. | |
| Output 2: Project management Support | n/a | **Project team:** Maintain operational readiness through staffing and operational support.<br><br>**Technical assessment &** | **Project team:** Operational readiness strengthened through recruitment of a project driver, improving field mobility and supervision capacity.<br><br>**Technical assessment & baseline:** Digital | |

| Expected output | Project Output Indicator | Accomplishment for the Reporting Period | | Links to Evidence |
|---|---|---|---|---|
| | | Quarter Target | Quarter Result | |
| | | **baseline:** Conduct baseline/technical assessments in Lusaka to inform tailored interventions; deploy and operationalize a digital baseline tool; collect and validate baseline data (including for 8 model sites).<br><br>**M&E / quality assurance:** Monitor implementation at **8** model sites; establish quality assurance processes and corrective action tracking.<br><br>**Governance & stakeholder engagement:** Strengthen coordination with MOH GF PCU, MoEng, REA, SZI and provincial structures; secure leadership buy-in and align delivery with national priorities.<br><br>**ProDoc:** ProDoc drafted and submitted for **UNDP internal review/clearance**, to formalize the results | baseline tool deployed and reviewed; technical assessments completed at **37** Lusaka and Central province facilities; baseline data collected for **8** model sites through joint site visits, strengthening evidence-based planning and reducing delivery and rework risk.<br><br>**M&E / quality assurance:** Monitoring initiated at **8** model sites; snag list established with contractor to track and close quality issues and corrective actions.<br><br>**Governance & stakeholder engagement:** Coordination sustained with MOH GF PCU, MoEng, REA, SZI and Provincial ICT Officers; ICT Community of Practice established; engagement initiated with the Presidential Delivery Unit; facilities-in-charge engaged and co-design workshop conducted—supporting alignment, ownership and implementation coordination.<br><br>**ProDoc:** ProDoc drafted and under **UNDP internal review/clearance**, progressing formalization of the project design and performance monitoring framework. | |

| Expected output | Project Output Indicator | Accomplishment for the Reporting Period | | Links to Evidence |
|---|---|---|---|---|
| | | Quarter Target | Quarter Result | |
| | | framework, governance and implementation arrangements.<br><br>**Communications & visibility:** Finalize and implement integrated communications and community engagement actions; deliver visibility materials and outreach for key milestones.<br><br>**SES compliance:** Finalize ESMP; induct contractors in SES/GRM prior to works; deploy GRM information at implementation sites. | **Communications & visibility:** Integrated Communications and Community Engagement Plan finalized and implemented; project website launched; IEC materials produced (pop-ups, banners); multi-channel campaigns delivered (LOA signing, End-User Validation Workshop, National ToT); procurement notices published online and in print media.<br><br>**SES compliance:** ESMP finalized; SES induction completed for both awarded contractors and their sub-contractors prior to works; GRM posters deployed (**TBC** sites). Completed ESIA for Kabwe ZAMMSA Warehouse new site in advance of potential new scope. | |

**Status of Activities**[3]

| | | Physical Performance | | Financial Performance (Cumulative) | | | |
|---|---|---|---|---|---|---|---|
| Expected output | Activity Indicator | Quarter Target | Accomplishment for the Quarter [4] | Planned Budget | Donor Code | Expenditure[5] | Delivery Rate[6] |
| **Overall Project Delivery – Output 1 & 2 Including GMS** | | | | 8,902,667.50 | 012772 | 6,978,685.10 | 78% |

[3] Ensure Consistency with AWP

[4] Use traffic light to indicate progress vis-à-vis annual output targets in AWP: Green (Completed), Yellow (Ongoing), Red (Delayed/Not started). Data provided can be qualitative or quantitative based on the nature of the output indicator

[5] Expense + commitment + advances (excluding 7% GMS)

[6] (cumulative expenditure/planned budget) * 100

| | | Physical Performance | | Financial Performance (Cumulative) | | | |
|---|---|---|---|---|---|---|---|
| **Expected output** | **Activity Indicator** | **Quarter Target** | **Accomplishment for the Quarter [4]** | **Planned Budget** | **Donor Code** | **Expenditure[5]** | **Delivery Rate[6]** |
| Output 1: Installation of Solar PV Systems in 400 Health Facilities | Number of health facilities equipped with operational solar PV systems | **Installation delivery:** Complete installation at **8** model sites.<br><br>**Solar equipment logistics:** Dispatch solar equipment for all provinces to enable nationwide rollout readiness.<br><br>**ZAMMSA warehouses (3):** Detailed design completed; procurement initiated for turnkey solution.<br><br>**Connectivity:** LOA signed; Starlink kits + subscriptions procured; installation services procured to enable activation.<br><br>**Capacity building:** National ToT delivered; **20** trainees.<br><br>**Sustainability:** Framework drafted; consultations initiated. | **No sites** operational in Q4 Installation works commenced at **8** model sites (ongoing into Q1 2026).<br><br>**Solar equipment logistics:** Solar equipment dispatched from supplier to **4 provinces** (**Copperbelt, Northwestern, Eastern, Southern**).<br><br>**ZAMMSA warehouses (3):** Detailed design completed; contractor placed purchase orders for major components for turnkey solution.<br>**Connectivity:** LOA signed with SZI; **751** Starlink kits + subscriptions procured (incl. **250 donated kits to GRZ by SpaceX via Starlink**); subscriptions pending activation post-installation. Installation procurement advanced through an RFQ (launched and closed) and transitioned to an EOI to broaden the qualified vendor pool; follow-on RFQ planned in Q1 2026 (limited competition in the initial RFQ). | 6,905,000.00 | 012772 | 5,892,939.49 | **85%** |

| | | Physical Performance | | Financial Performance (Cumulative) | | | |
|---|---|---|---|---|---|---|---|
| **Expected output** | **Activity Indicator** | **Quarter Target** | **Accomplishment for the Quarter [4]** | **Planned Budget** | **Donor Code** | **Expenditure[5]** | **Delivery Rate[6]** |
| | | | **Capacity building:** National ToT completed; **20** Provincial ICT Officers trained; **6** team members completed KGRTC online training.<br><br>**Sustainability:** Framework development initiated; consultations scheduled. | | | | |
| Output 2: Project management Support | n/a | **Staffing:** Maintain operational readiness through staffing and operational support.<br><br>**Technical assessment & baseline:** Deploy digital baseline tool; complete Lusaka baseline/technical assessments and validate datasets to inform intervention planning; collect baseline data for **8** model sites during joint visits.<br><br>**M&E / quality assurance:** Conduct monitoring at **8** model sites; establish snagging and corrective action tracking mechanism.<br><br>**Governance & stakeholder engagement:** Maintain | **Staffing:** Project team operational (CTA, IES, NES, Admin) and driver recruited.<br><br>**Technical assessment & baseline:** Digital baseline tool deployed/reviewed; technical assessments completed at **20** Lusaka facilities; baseline data collected for **8** model sites during joint visits.<br><br>**M&E / quality assurance:** Monitoring initiated at **8** model sites; snag list established and used to track corrective actions.<br><br>**Governance & stakeholder engagement:** Coordination sustained with MOH GF PCU/MoEng/REA/SZI/provinces; | 1,415,250.00 | 012772 | 984,666.51 | 70% |

| | | Physical Performance | | Financial Performance (Cumulative) | | | |
|---|---|---|---|---|---|---|---|
| **Expected output** | **Activity Indicator** | **Quarter Target** | **Accomplishment for the Quarter [4]** | **Planned Budget** | **Donor Code** | **Expenditure[5]** | **Delivery Rate[6]** |
| | | regular coordination with MOH GF PCU, MoEng, REA, SZI, provincial ICT officers and facilities-in-charge; strengthen leadership buy-in and alignment with national priorities.<br><br>**ProDoc:** Draft ProDoc submitted for **UNDP internal review/clearance**.<br><br>**Communications & visibility:** Implement integrated communications plan and key visibility actions; publish procurement notices and milestone communications.<br><br>**SES compliance:** Finalize ESMP; complete SES induction prior to works; deploy GRM information at implementation sites. | ICT Community of Practice established; PDU engagement initiated; facility engagement and co-design workshop conducted.<br><br>**ProDoc:** Draft ProDoc prepared and **under UNDP internal review/clearance**.<br><br>**Communications & visibility:** Communications plan implemented (website launched; IEC produced; campaigns delivered; procurement notices published).<br><br>**SES compliance:** ESMP finalized; SES induction completed prior to works; GRM posters deployed (**TBC** sites). | | | | |

## C. Key Challenges and Next Steps

*Explain why activity indicator targets were not met and plans to catch-up in the next quarter*

Key Challenges

- **Turnkey solar contractor performance constraints for 423 health facilities affected planned delivery.** The contractor did not meet Q4 milestones for shipment, mobilization and installations. To protect delivery integrity, implementation focus was **re-prioritized to the 8 model sites** as the initial deployment package; however, timelines were still not met.

- **Supply chain and customs clearance delays, including an expedited shipment.** One shipment lot experienced **extended customs clearance delays** that were not adequately explained and were likely linked to documentation/clearance readiness on the contractor side. This delayed availability of equipment required for field works and contributed to slippage.
- **Weaknesses in contractor project management and mobilization.** Delays were observed in deployment to Zambia, engagement and onboarding of subcontractors, and responsiveness to implementation planning requirements. These issues reduced execution capacity during the quarter.
- **Workmanship and installation quality issues at model sites necessitated strengthened quality assurance.** Joint monitoring identified installation issues requiring correction, including: PV panels installed on the wrong roof plane and/or overhanging; equipment cabinets installed in non-designated rooms; insufficient materials made available for wiring/electrification; and inconsistent/non-standard cable colour application within the same installation. A **snag list** was established to track corrective actions.
- **Outstanding scope gaps for facility wiring/electrification require formal change management.** Early site works and assessments highlighted gaps between assumptions and on-site electrical conditions, including requirements for internal wiring/electrification beyond the originally supplied materials. A **change management process** is being developed to address scope gaps in a controlled, compliant manner.
- **Baseline data quality constraints for planning (GPS points).** Of 95 facilities with missing/incorrect GPS points, **75 were corrected with MOH**; remaining gaps still present logistical planning challenges for assessment and rollout sequencing.
- **Differentiated performance across work packages requires careful sequencing.** While the **ZAMMSA warehouses solarization package** progressed as planned (design completed and procurement advanced through purchase orders), the **423 health facility solarization package** experienced significant execution delays, requiring re-planning and additional oversight.

The following key activities are scheduled for the upcoming quarter:

**Solar PV — 423 Health Facilities**

- Commission the **8 model sites** and close snags with QA sign-off.
- Agree a **revised implementation schedule** (shipment–clearance–mobilization–installation–commissioning) and strengthen subcontracting controls and site supervision.
- Finalize **change management** to address wiring/electrification scope gaps and proceed with prioritized installations, aligned to site readiness.

**Solar PV — ZAMMSA Warehouses (3)**

- Progress delivery against issued purchase orders and commence installations.
- Conduct QA and commissioning, and coordinate site readiness and handover/acceptance with ZAMMSA.

**Connectivity — Starlink**

- Complete **EOI** to broaden vendor pool and issue a follow-on **RFQ** for installation services.
- Install and **activate at least 200 links**, aligned to site readiness and commissioning.
- Implement asset traceability (labelling, registration, chain-of-custody) with government counterparts.

**Smart Health Facilities — IoT Pilot (8 model sites)**

- Procure remaining IoT equipment and complete installation/configuration at the **8 model sites**.
- Validate dashboards/alerts and agree minimum pilot reporting outputs and operational roles.

**Capacity Building (target: 1,000 trainees)**

- Cascade training to **facility staff, electricians, and biomedical staff**, covering O&M, troubleshooting, safety, and basic reporting for solar/connectivity/IoT.

**Sustainability**

- Finalize the Sustainability Framework and translate into practical O&M arrangements (roles, reporting, spares, escalation, handover packages).

**Communications & Visibility**

- Deliver a **government-led launch event** for the 8 model sites and continue milestone communications under the project plan.

**Governance & Planning**

- Complete the **ProDoc** (internal clearance) and convene the **Project Board** to endorse.
- Hold a **virtual project kick-off** with all Provincial Health Directors and complete final site validation.

## D. RISK LOG UPDATE[7]

*Assess identified risks and record new risks that may affect project implementation.*

*Include risks identified in the Project's Social and Environmental Screening, Programme Visits, audit/spotcheck findings, if any.*

| Risk Category | Risk Description | Risk Validity | Risk Level | Risk Owner | Risk Status | Risk Mitigation Measure | Risk Treatment Owner | Status of Risk Treatment | Links to Evidence |
|---|---|---|---|---|---|---|---|---|---|
| Standard 7: Labour and Working Conditions | Generation of electronic waste ("e-waste") thus solar panels and/or batteries at the end of their useful lives. | 01/04/2025 – 31/12/2028 | Moderate | Chief Technical Advisor, Ranya Sherif | Monitoring | Develop and implement a Targeted Waste Management Plans to manage E-waste | Solar for Health Project Team | Mitigation plan in development | Concept Note - Toward a Circular Solar Health System: Scoping for Safe End-of-Life (EoL) & e-Waste Management in Zambia |
| Standard 8: Pollution Prevention and Resource Efficiency | Installation of the solar systems | 01/04/2025 – 31/12/2028 | Moderate | Chief Technical Advisor, Ranya Sherif | Monitoring | The project will hire certified solar installers with trained personal OSH (with Valid Workers Compensation Certificate). | Contract Manager, ITM Green Energy Team, Peter Lusis | Mitigation plan in place | Peak HSSE Plan – v2 |

[7] Ensure consistency with Risk Log in ProDoc and Quantum

| Risk Category | Risk Description | Risk Validity | Risk Level | Risk Owner | Risk Status | Risk Mitigation Measure | Risk Treatment Owner | Status of Risk Treatment | Links to Evidence |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | The contractor will provide Personal Protective equipment (PPE) | | | |
| Standard 2: Climate Change and Disaster Risks | Damages to installed solar system (Open air structures) | 01/04/2025 – 31/12/2028 | Low | Chief Technical Advisor, Ranya Sherif | Monitoring | The solar systems are designed to meet national and international codes and standards including electrical and structural safety considerations as well as equipped with anti-theft mechanisms to protect from tampering. Flood risk analysis conducted for all sites. | Contract Manager, ITM Green Energy Team, Peter Lusis | Mitigation plan in place | Design pack |

| Risk Category | Risk Description | Risk Validity | Risk Level | Risk Owner | Risk Status | Risk Mitigation Measure | Risk Treatment Owner | Status of Risk Treatment | Links to Evidence |
|---|---|---|---|---|---|---|---|---|---|
| Standard 3 Community Health, Safety & Security); Standard 8 (Pollution Prevention & Resource Efficiency) | Installing PV on asbestos-containing roofing (ACM) may disturb fibers, exposing workers/patients/communities. | Q3 2025; ongoing into Q4 | High | CTA – Solar for Health | Active | No PV on ACM; redesign to iron-sheet or ground-mount. | Contract Manager (ITM); Contractor; MOH | Mitigation in place; risk treatment plan finalized and communicated to the contractor; compliance monitoring underway | ITM/Peak Meeting Notes |
| Coordination / Site Allocation | Incomplete cross-partner mapping of active projects and site allocations has resulted in 46 confirmed overlaps with other implementers; additional duplications continue to surface as new partner lists emerge. | Q3 2025 (ongoing into Q4) | High (Med likelihood / High impact) | Chief Technical Advisor, Ranya Sherif | Active | Establish a centralized, GRZ-hosted digital registry for partner mapping & asset inventory.<br><br>MOH to enforce pre-mobilization cross-checks against the registry. | MOH Infra-structure Unit (lead) with UNDP support (tooling, coord.) | In progress: MOH convened validation; registry design/initiation underway; partner list reconciliation ongoing. | 20240826 - TWG_Terms_of_Reference-_26.08.2024.docx |
| **New:** Standard 3 Community Health, Safety & Security); Standard 8 (Pollution | Lithium batteries increase the risk of fire in the health facilities | Q1 – post-installation | Moderate | CTA – Solar for Health Chief Technical Advisor, Ranya Sherif | Active | Equipment quality standards, wiring by qualified personnel, install smoke detector and | Contract Manager (ITM); Contractor; MOH | SOP drafted, smoke detectors and fire extinguishers procured | SOP - Response to Smoke or Fire in Solar - Battery Technical Room.docx |

| Risk Category | Risk Description | Risk Validity | Risk Level | Risk Owner | Risk Status | Risk Mitigation Measure | Risk Treatment Owner | Status of Risk Treatment | Links to Evidence |
|---|---|---|---|---|---|---|---|---|---|
| Prevention & Resource Efficiency) | | | | | | fire extinguisher for each technical room | | | |

**1. Emerging SES risks, issues of concern (All Projects)**

*(List new risks identified in the period under review- Emerging risk to be added to the register in quantum/Quantum +)*

Refer to updated risk register for new risk and mitigation related to fire and life safety.

*2.* **Status of complaints/grievances/Feedback**

*(List grievances, and current status, issues of concern, feedback received from stakeholders)*

No complaints received in the reporting period.

**Grievance/Feedback Register**

| *No.* | *Description of Grievance/Feedback* | *Date Received* | *Reported By* | *Action Taken* | *Comments* |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

**3. Stakeholder Engagement**

| Dates of Engagement | Who was engaged | Issues discussed | Main Outcomes |
|---|---|---|---|
| 03/04/2025 | S4H Project Launch (Ministry of Energy, Ministry of Health, Media and other Public and Private Stakeholders) | Launch and presentation of the S4H Project | Project formally launched and presented to key stakeholders |
| 01/04/2025 | UNICEF/MOH Monthly Coordination meeting for the HFSE project (Jordan, Zacharia) | Presentation of the S4H project and ambition to connect all systems via a third-party digital platform | S4H project presented with an ambition to connect all systems via a third-party digital platform |
| 04/07/2025 | Project Steering Committee (MOE, MOH, MLGRD, REA, ZEMA; UNDP, ILO, UNICEF) | Project scope and progress update; coordination arrangements | Need for stronger GRZ representation in coordination meetings noted and endorsed |

| Dates of Engagement | Who was engaged | Issues discussed | Main Outcomes |
|---|---|---|---|
| 13/08/2025 | UNDP & Smart Zambia Institute (SZI) | Drafting initial budget for health-facility internet connectivity; roles, timeline, logistics/technical risks | Initial budget drafted and submitted to SZI for review; pending endorsement and LOA signing |
| 19/08/2025 | ZAMMSA Warehouse Site Visit (Lusaka) – ZAMMSA/MOH/UNDP | On-site review of warehouse solarization scope, metering and logistics | Site conditions validated; actions logged for design finalization |
| 20/08/2025 - Recurring ~bi-weekly | UNDP / MOH – Global Fund PCU (bi-weekly) | Implementation challenges; align priorities for next quarter; monitoring approach | Agreed implementation priorities; bottlenecks addressed; strengthened coordination and activity tracking |
| 29/08/2025 | SpaceX/UNDP Partnership Dialogue (Starlink) | Exploration of connectivity partnership for health facilities | Follow-up actions captured with UNDP and SpaceX focal points |
| 03/09/2025 | Lusaka Provincial Health Office & District Health Directors | District/provincial project kick-off; scope, schedule, data needs | Shared data-collection template; received facility-in-charge contacts; one site swapped based on DHD feedback (already solarized) |
| 03/09/2025 - 31/12/2025 | Facilities-in-Charge (8 model sites and 31 sites assessed in Lusaka and Central Province) | Site introductions; energy needs, responsibilities; data template walk-through; verification of facility list; briefing on Governance Redress Mechanism and handover of GRM poster | Contacts confirmed; determination of solar panel mounting and technical cabinet location, floor plan development |
| 03/09/2025 | External Engagement planning (MOH Directorate of Health Promotion; MoE Senior PR Officer) | Communications and external engagement approach for S4H | Comms focal points confirmed; outline of joint messaging and upcoming touchpoints agreed |
| 05/09/2025 | Ministry of Energy (Technical Services) – Introductory meeting | Standards, commissioning checklist, load profiles; early utility engagement | Focal points designated; MoE to share latest standards and templates |
| 09/09/2025 | Ministry of Local Government & Rural Development (MLGRD) | Briefing on S4H rollout; coordination with CDF & district structures | Next steps defined for district coordination and information flow |
| 25/09/2025 | A2EI – Prospect open-source platform (coordination meeting) | Potential integration for monitoring & planning; info-session concept | Agreed to arrange GRZ info-session; data-sharing needs outlined |
| Recurring: 05/03–31/12/2025 (Wednesdays) | Weekly progress meeting – UNDP/ITM Green Energy | System architecture, digital platform integration, procurement & delivery sequencing | Dependencies mapped; interfaces clarified; actions captured each week |
| Recurring: 13/08–31/012/ (Wednesdays) | Weekly progress meeting – UNDP/Peak (Contractor for 423 Health Facilities) | Contractor mobilization, design reviews, schedule, risk log | Weekly tracker established; design queries resolved; next 2-week look-ahead agreed |

| Dates of Engagement | Who was engaged | Issues discussed | Main Outcomes |
|---|---|---|---|
| 03/10/2025 - 31/12/2025 (Wednesdays) Recurring | ASACO/Lunai (ZAMMSA Warehouses Solarization) – Kick-off with UNDP, ZAMMSA, MOH, MoE | Kick-off: scope, roles, timeline, coordination mechanisms | Design reviews, procurement, site logistics, HSE, commissioning planning |
| 05/10/2025 | Rural Electrification Authority (CEO, Director Engineering Services, Manager Off-Grid (A)) | Alignment with REA off-grid strategy; roles and data-sharing; coordination at district level | Agreed focal points and information-sharing; coordination mechanism for rural sites confirmed |
| 06/10/2025 | A2EI Prospect Info-Session (Virtual) – GRZ technical colleagues; Co-hosted by UNDP Zambia & A2EI | Prospect platform overview; integration pathways with S4H (solar monitoring, IoT/digital twins), data flows & governance, and GRZ onboarding steps. | Session scheduled; objective is to gather technical inputs and assess integration pathways (monitoring, IoT, digital twins) |
| 06/10/2025 | Ministry of Housing, Infrastructure and Urban Development | Alignment with GRZ Standards | Open lines of communication for technical quality assurance and joint monitoring through the TWG |
| 09/10/2025 | External Partners – SHS External Engagement Meeting | Project updates and feedback | Strengthened partner alignment on SHS strategy |
| 10/10/2025 | UNDP, MOH – Technical Session 2 | Modular solar solutions | Shared systemic model for scaling SHS |
| 19/11/2025 | ZESCO | Net Metering at ZAMMSA Warehouses and grid-connected HFs | Initiated planning for net metering at ZAMMSA warehouses |
| 22/10/2025 | UNDP, MOH – eVin Discussion | Integration with health systems | Clarified roles and data flow for eVIN |
| 07/11/2025 | Asaco – SES Induction | Social & Environmental Standards | Orientation on SES compliance and PSHEA policies |
| 20/11/2025 | MOH & Smart Zambia Institute (SZI) — Zambia Smart Health Facilities Workshop (ZMB_GF_SHF); End-user consultation | IoT sensor packages, digital monitoring systems | Validated design requirements, use-cases and prioritized sensor requirements |
| 01/12 – 05/12/2026 | ICT & Digital Health Training/Workshop (MOH, SZI sub-national focal points) | Connectivity, data, platform onboarding | Trained 20 provincial ICT and MOH ICT officers on Starlink and Digital Health topics. Established cohort for national ICT Community of Practice |
| 16/12/2025 | Engagement with Presidential Delivery Unit | Smart Health Systems Initiative: solar installations, internet connectivity, IoT monitoring, alignment with SmartCare Pro & eLMIS, sustainability via CDF | Agreed on collaboration, local ownership, youth involvement, and integration with national systems |
| 18/12/2025 | Global Fund Country Coordination Mechanism | Briefed on project progress and vision for future interventions | Shared understanding of objectives, progress and next steps |
| Planned Q1 – 2026 | MOH Infrastructure Sub-Committee | Project progress/technical matters | |

| Dates of Engagement | Who was engaged | Issues discussed | Main Outcomes |
|---|---|---|---|
| Planned Q1 – 2026 | MOH Solarization of Health Facilities TWG | Technical review, standards, and coordination | Final endorsement of site list, guidance on commissioning procedures. |
| Planned Q1 – 2026 | Country-wide Provincial & District-level Kick-Off (Virtual) | Roll-out briefings, roles, data processes | |
| Planned Q1 – 2026 | Project Steering Committee | Governance, progress, risks, decisions | |

## 4. Communications and Visibility

| Description of all communication and visibility activities & budget | Link |
|---|---|
| **Launch of the Solar for Health Project** | https://x.com/undpzambia/status/1907817053534273870?s=46 **JSDGET (1) - OneDrive** |
| **Smart Health Facilities Awareness initiative- Television Interview** | SMART Health Systems ZNBC Script. |
| **Smart Health Facilities Awareness initiative- Online Article** | Smart Health Facilities: A Turning Point for Zambia's Healthcare \| United Nations Development Programme |
| **Project Communications Folder – Draft Implementation plan, IEC materials – banners, pop-ups, posters , stationery, wearable visibility** | 05 - Communications |
| **Project Website** | https://www.undp.org/zambia/projects/smart-health-systems |
| **SZI-UNDP LOA Signing Ceremony - Social Media - X** | https://x.com/UNDPZambia/status/1984273349351194973 |
| **SZI-UNDP LOA Signing Ceremony - Social Media - Facebook** | https://www.facebook.com/UNDPZambia/posts/pfbid02uDHhedsBuni2mhxMYEULuioPuUyfG6oq88sjM9jnRgrrVuXATW3N6b5RFi13XX4Pl |
| **SZI-UNDP LOA Signing Ceremony - Social Media - LinkedIn** | https://www.linkedin.com/posts/undp-zambia_historic-milestone-for-digital-healthcare-activity-7390041294900752384-Mcrb |
| **SZI-UNDP LOA Signing Ceremony - Print Media** | Media Coverage |
| **Smart Health Facilities End-User Validation Workshop - Social Media - X** | https://x.com/undpzambia/status/1992945031796367369 |
| **Smart Health Facilities End-User Validation Workshop - Social Media - Facebook** | https://www.facebook.com/share/p/17Q7AVBQST/ |
| **Smart Health Facilities End-User Validation Workshop - Social Media - LinkedIn** | https://www.linkedin.com/posts/undp-zambia_**Building-smarter-more**-activity-7398711221975318529-EpeJ/ |
| **National TOT Workshop - Health Facility Connectivity - Social Media - X** | https://x.com/UNDPZambia/status/1995819495688909041 |

| | |
|---|---|
| **National TOT Workshop - Health Facility Connectivity - Social Media - Facebook** | https://www.facebook.com/UNDPZambia/posts/pfbid02kY4nXPGqQW2Xj8TN7VfF2uajQK1fga39jdiKFUSsa39DgkKrBm8YgqtkP8XtSiwkl |
| **National TOT Workshop - Health Facility Connectivity - Social Media - LinkedIn** | https://www.linkedin.com/posts/undp-zambia_reliable-connectivity-means-fewer-stock-outs-activity-7401589254369349632-h97g |
| **National TOT Workshop - Health Facility Connectivity - Social Media - X** | https://x.com/ahunnaeziakonwa/status/2000960549165711827?s=48 |
| **National TOT Workshop - Health Facility Connectivity - Print Media** | WhatsApp Image 2025-12-16 at 15.09.01.jpeg |
| **National TOT Workshop - Health Facility Connectivity - UNDP Website** | https://www.undp.org/zambia/press-releases/zambia-takes-major-step-toward-connected-healthcare-national-tot-workshop |
| **National TOT Workshop - Health Facility Connectivity - UNDP Website** | https://www.undp.org/zambia/blog/connecting-care |
| **ZANIS Interview - UNDP's Work with the Ministry of Health** | Media Coverage |
| **Presidential Delivery Unit - Social Media - LinkedIn** | https://www.linkedin.com/posts/pdu-zambia_yesterday-we-held-a-meeting-with-a-delegation-activity-7406992915647967232-o9FA |
| **Procurement Notice - Starlink Installation - Website** | https://procurement-notices.undp.org/view_negotiation.cfm?nego_id=41162 |
| **Procurement Notice - Starlink Installation - Print Media** | Daily Mail, December 6, 2025 - Page 11 |

## E. Monitoring & Evaluation

| **Description of all M&E activities conducted and budget** | **Link** |
|---|---|
| Weekly coordination meetings with contractors (Peak/Asaco) — action points tracked | Contract Manager (ITM) Meeting Notes |
| Design reviews and updates — recorded comments | Contract Manager (ITM) Feedback to Vendors |
| Baseline site assessments — ground-truthing and validating assumptions (facility info, loads, roof type, GPS/photos) | 01 - Site Assessments |
| Online Site Assessment Form (Survey123) — developed & deployed | Power Supply & Connectivity: |
| Connectivity M&E framework — draft prepared | 03 - SZI LOA Documents |
| SZI micro-assessment — completed for LOA | DIM_SRF__SZI_SPOT_CHECK.docx.pdf |

| Description of all M&E activities conducted and budget | Link |
|---|---|
| Partner site-list check — 46 overlaps identified & flagged to MOH Infrastructure Unit | Appendix I - Site Coordinates FINAL v2 2025.10.14.xlsx |
| A2EI "Prospect" energy-monitoring tool exploration - Q4 info-session planned | Meeting Follow-up Email |
| Weekly coordination with Smart Zambia Institute – action points tracked | 01 - Project Implementation Meetings |
| Monitoring Installation at 8 Model Sites | Monitoring |

**Lessons Learned SES** ***** *(All Projects)*

*(Examples that highlight either successes or failures in implementing SES; lessons learnt to improve SES implementation).*

| # | Type | Date Identified | Successes | Shortcomings | Recommended Solutions | Submitted, updated by |
|---|---|---|---|---|---|---|
| | Project Management/Project Results/Human Factor/Other | | *Describe what has worked well. What factors supported this success?* | *Describe the challenges or areas for improvement and what was unanticipated* | *How were challenges overcome and how should things have been done differently/better?* | |
| Q3-1 | Project Management | Aug-25 | Close coordination with MOH and transparent communication across partners enabled rapid reconciliation of site lists; country-level technical capacity helped validate changes promptly. | Multiple revisions of the 423-site list due to overlaps with other partners (46 sites) created rework and scheduling pressure. | Activate the TWG as the routine forum for partner alignment; implement a GRZ-hosted facility inventory & partner-mapping tool; require pre-mobilization cross-checks and simple change-control. | CTA – Solar for Health |
| Q3-2 | Project Results | Aug-25 | Timely technical engagement with MOH and advice from Ministry of Energy supported a clear, standards-based position; | Disagreement with vendor on electrical cable sizing to meet safety and | Strengthen technical evaluation criteria (AC design scrutiny) in procurement; document compliance references to Zambian standards; use joint design reviews to close gaps early. | CTA – Solar for Health |

| # | Type | Date Identified | Successes | Shortcomings | Recommended Solutions | Submitted, updated by |
|---|---|---|---|---|---|---|
| | | | collaborative discussions with vendor maintained constructive relationships. | performance standards delayed approvals. | This approach was already applied for the recent procurement of solar for ZAMMSA sites. | |
| Q3-3 | Project Management | Aug-25 | Regular weekly meetings and email follow-ups provided visibility and a common tracker for actions; rapid escalation pathways were agreed. | Vendor delays in onboarding a local service provider and in shipping affected early mobilization. | Require local service provider attendance at site visits during bidding and presence from Day 1; include mobilization milestones and progress evidence in the contract; continue weekly coordination with clear action owners. | CTA – Solar for Health |
| Q3-4 | Human Factor / Other | Aug-25 | Rapid deployment of site assessments after team onboarding; ground-truthing with facilities improved accuracy; teamwork with MOH facilitated access and verification. | Initial assumptions and data gaps required on-site validation to refine designs and schedules. | Include site assessment and custom design requirements in the contract; sequence assessments to de-risk assumptions before final design; maintain concise checklists and photo/GPS evidence. | CTA – Solar for Health |
| Q4-1 | Project Management | Dec-25 | Co-delivery with MOH counterparts increased credibility and ownership, and the TOT framing clarified participants' role in cascading training. | Cascade readiness needed more structure—participants lacked standardized lesson plans/tools and an ongoing forum to sustain quality and troubleshoot. | Launch a monthly virtual CoP for continuous support, peer learning, and tracking cascade delivery. Develop Moodle e-learnings to standardize core modules and enable consistent onboarding/refresher training nationwide. | CTA – Solar for Health |

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