

Evaluation Report - Attached

Yes No Date: *dd.mm.yyyy*

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Acronyms and abbreviations:

CBO	Community-Based Organization(s)
MHP	Micro Hydro Power Station
RES	Renewable Energy Sources
FAS	First Aid Station (point)
PVS	Photo (solar) Voltaic Station
MFI	Micro-financial institution
NGO	Non-Governmental Organization(s)
PRP	Poverty Reduction Programme
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial development Organization
PHC	Primary Health Care
CREED	Center for Renewable Energy and Energy Efficiency Development Public Found

EXECUTIVE SUMMARY

- In accordance with the “National Energy Programme for 2007-2010” approved by the Government of the Kyrgyz Republic and also with the “Strategy on Development of the Fuel and Energy Complex until 2025”, it is envisioned to build local capacity for poverty reduction, improve living conditions of rural populations and generate opportunities for income increases through developing the use of renewable energy sources (RES) such as MHP and PVS power. In the framework of the DaO “Supply of Reliable Energy to Rural First Aid Stations” (UNDP/UNIDO/UNV/WHO 2010-2012) and “Improving of First Aid Medical Services to the Rural FAS through Access to Alternative Energy” (UNDP/UNV/WHO-2013) the Project installed in total 7 MHP and 18 PVS of 1,5-3,0 kWt in rural FASs in 19 villages of all 7 provinces. UNDP has been responsible for installing seven 3 kW micro-hydro plants, two 1,5 kWt and four 1,2 kWt PVS. UNIDO installed twelve 3 kWt PVS at twelve FAS as initially planned. The project aimed to increase the supply of reliable energy to rural first aid stations in each province by equipping them with micro-hydro units and solar energy panels to ensure greater access to electricity necessary for the vital treatment of rural populations, most importantly for pregnant women and other gender-specific issues. This positively contributed to the pilot FAS operations: reliable uninterruptable service for the rural populations and proper functioning of lighting and equipment, including refrigeration of essential medicines and vaccinations, and sterilization equipment. Energy-saving technologies in the pilot FASs help to efficiently use green energy and meet the needs of local populations. This project was implemented while demonstrating the effectiveness and benefits of renewable energy through an example of a small-scale energy initiative, so the Government could promote more reforms in this sector. It had also a positive effect on social dialogue and cooperation at national, regional and local levels, as well as to the development of local communities. Important achievements of the Programme during the reporting period and key elements from the detailed report are summarized below.

I. Purpose

To improve the reliability of electricity supply to rural FASs (First Aid Stations (points) and local communities. In 2010-2013, the project was operating based on the following UN/UNDP project documents’ provisions:

- UNDAF A2 outcome: Pillar C: Inclusive and Sustainable Job-Rich Growth for Poverty Reduction - Outcome #6: By the end of 2016 sustainable management of energy, environment and natural resources practices will be operationalized.
- Expected outcome CP A 2.9: Environmental sustainability and climate change resilience will be integrated into pro-poor (socio-economic) development policies and programmes.

II. Assessment of Programme Results

- The project contributed to strengthening the capacity of local communities by using RES through the installation of pilot MHPs and PVS, improving medical services at rural FASs, as well as establishing a network of local experts to independently maintain the RES equipment. All the activities have been coordinated by UNDP in order to streamline efforts and focus on the cooperation with local communities. The project was an active cooperation of UNDP, UNIDO, WHO, UNV in transferring knowledge and skills pertaining to better use of RES potential in rural communities for sustainable development.

i) Narrative reporting on results:

From January to December 2010-2013, the UNDP project worked in accordance with approved Working Plan, in partnership with UNV, UNIDO, WHO, local governments and ministries. 70 pilot FASs were researched and 19 were selected to install PVS stations with a 1, 5 - 3 kW capacity and

MHP with a 3-5 kW capacity. Tenders were conducted and necessary equipment was purchased. UNDP and UNV installed photoelectrical stations with a 1,2-1,5 kW capacity in 6 pilot FASs. UNIDO installed the photoelectrical stations with a 3 kWt capacity at 12 pilot FASs. UNDP and UNV delivered pipes and equipment of 7 micro hydro MHPs to 7 pilot FASs and had them installed. Two “Trainings on Renewable Energy Sources” were conducted for local specialists by UNDP, UNV, UNIDO, WHO, CREEED.

Monitoring and information support were conducted by WHO. Information about the project’s activities was disseminated through TV, radio, newspapers, and NGO channels. A series of TV programs about the progress of the project was developed and broadcasted at the First National TV Channel. Two press tours were conducted in Osh and Chui regions with a participation of more than 20 journalists from different media in 2013. A roundtable for 20 journalists was conducted with collaboration of representatives from the Ministry of Health, UNDP and NGOs. Two types of posters and booklets about solar panels and micro hydro stations were developed. 5400 copies printed in Kyrgyz and Russian were distributed to target groups. Also, medical overalls, T-shirts and caps were designed and developed for staff of primary health facilities for promotion of project activities and implementing agencies. UNIDO produced promo windproof parkas and caps with the UN agencies’ logos. Two manuals on renewable energy sources and energy efficiency were developed. 1000 copies of the manuals on the benefits of renewable energy sources and energy saving technologies were distributed to health professionals. Promotion of small hydroelectric power stations and RES for installation on FASs was conducted by carrying out series of workshops (2012,2013) for technical personal of primary medical facilities and local authorities in order to increase capacity of FASs’ personal to maintain of photoelectrical stations.

Monitoring and evaluation of the project were conducted in cooperation with an assessment group from Department of Nontraditional and Renewable Energy sources from Kyrgyz-Russian Slavic University. The assessment of efficiency of photoelectric stations and energy savings technologies was prepared and this information was shared with partners and presented to the Ministry of Health (reports available).

A technical review of the completed project was conducted by a UNIDO international consultant in November 2013.

WHO, in cooperation with UNDP, introduced energy efficiency technologies in two pilot FASs situated in the Chui region. Pilot FASs were reconstructed based on developed constructional plans using modern energy saving technologies. The reconstruction included introduction of energy efficient windows, doors, insulation of walls, ceilings and basement

- **Outcomes:** DAO Outcome D.4 Improve the access of critical institutions and vulnerable rural communities to reliable and sustainable sources of energy.
- The main beneficiaries of project will be the residents of Kyrgyz Republic, Issyk-Kul oblast, Jeti-Oguz rayon (Taldy Bulak village, Karakolka village, Ak-terek village), Ton rayon (Ala-Bash/ Kara-Koo village,); Naryn oblast, Kochkor rayon (Karakungyi and Tulek villages); Osh oblast, Nookat rayon (Kashkaldak village), Uzgen rayon (Zerger and Arakol villages), Kara Suu rayon, Barak village, ; Jalal-Abad oblast, Aksy rayon (Tashtak village, Razan Sai village), Ala Buka rayon, Bulak Bashy village ; Batken oblast, Kadmjai rayon (Maidan village); Talas oblast, Kara-Burin rayon (Kok-Sai village); Chui oblast, Sokuluk rayon (Nijnja Serafimovka village, Konush village); Jail rayon (Kojomkul aiyl okmotu); Chui rayon (Alchaluu village). Pilot FASs are presented in the below attached list. The list of the FAPs has been shared with the State Agency of self-governance to ensure the safety of the equipment.
- **Outputs:** Strengthening capacity of communities by improving the reliability of electricity supply to rural FASs and local communities; thus empowering rural communities in the remote and low-growth areas through improvement of access to medical service by example of installation of pilot RES equipment.

- Output 1. Support provided for reliable energy supply of rural first aid stations in 7 oblasts of Kyrgyzstan (Responsible: UNDP, UNV, UNIDO, WHO)
 - Increased technical assistance (UNDP, UNIDO) - 100% completed (RES equipment was purchased, delivered and installed)
 - Increased local capacities (UNDP, UNIDO, WHO) - 100% completed (42 local specialists are trained on use of RES)
 - Increased awareness of renewable energy sources through functional demonstration (UNDP, UNIDO, WHO) - 100% completed
 - Increased access to microfinance, enabling people to promote and implement renewable energy technologies (UNDP, UNIDO) - 100% completed (30 local specialists are trained on micro financing of RES)
 - Improved environmental protection, by safeguarding the local environmental resources (UNDP) –100% completed (Awareness was increased by training 42 local specialists on environment and local natural resources protection)
 - Improved access to quality medical services especially for women and children (WHO) - 100% completed.
- **Qualitative assessment:** The project was implemented with the direct control of the country office of UNDP in accordance with UNDP procedures. Coordination was achieved through continuous monitoring and exchange of information between all parties involved in the project (UNDP, UNV, UNIDO, WHO).

ii) Indicator Based Performance Assessment:

Using the **Programme Results Framework from the Project Document / AWP**s - provide details of the achievement of indicators at both the output and outcome level in the table below. Where it has not been possible to collect data on indicators, clear explanation should be given explaining why.

	<u>Achieved</u> Indicator Targets	Reasons for Variance with Planned Target (if any)	Source of Verification
<p>Outcome 1⁹ Improve the access of critical institutions and vulnerable rural communities to reliable and sustainable sources of energy.</p> <p>Indicator: . # of installed pilot micro HPS and Photo voltaic solar panels in FASs. - # of trained FAS personnel saying they are better skilled to deal with FAS (gender disaggregated).</p> <p>Baseline: Rural and remote areas of the country, in particular, suffer from a lack of reliable electricity supply; FAS staff is not familiar with energy-generating equipment.</p> <p>Planned Target: Installation of 7 pilot micro Hydro Power Stations and 4 Photo voltaic solar panels in rural First Aid Stations; 20 staff trained and able to operate energy-generating equipment.</p>	<p>Report on carried out feasibility studies for installation of RES and FAS – identified Pilot sites and installed 7 micro Hydro Power stations and 18 Photovoltaic Power stations on 1,5-3,0kWt in rural First Aid Stations in Kyrgyzstan.</p> <p>#Installed pilot micro RES equipment’s –Installed 18 Photovoltaic Power stations on 1,5-3,0 kWt</p> <p># of trained FAS personnel – more 42 specialists from local self-body’s and rural FAS passed successful training on use and maintains RES equipment</p>	<p>Extension of Project duration is needed in 2014 for finalization of commissioning works and technical modernization of micro hydro units at rural FASs at no cost extension since UNDP has attracted additional funding to accomplish these above stated works to fully meet project’s goals.</p>	<p>Training reports (List of participants), project annual report</p>

⁹ Note: Outcomes, outputs, indicators and targets should be **as outlines in the Project Document** so that you report on your **actual achievements against planned targets**. Add rows as required for Outcome 2, 3 etc.

iii) Evaluation, Best Practices and Lessons Learned

Problem / Challenge faced: Extension of Project duration the UNDP component is needed for finalization of commissioning works and technical modernization of micro hydro units at Rural First Aid Stations at no cost extension since UNDP has attracted additional funding to accomplish these above stated works to fully meet project's goals 30/12/2014.

Lessons Learned: In the course of implementation of the project the following lessons were learned:

1. Ministry of health is very much interested in extension of this approach for Primary Health facilities.
2. The effectiveness of the new technologies is increasing in case of renovation and insulation of the buildings of the PHC facilities.
3. Photovoltaic stations are more convenient for the PHC facilities than the micro hydro stations.
4. The selection of the health facilities needs to be done based on the good managerial capacity of the local administration/authorities;
5. More in depth work is needed on the part of the international organizations to instil partners with more confidence such that local partners/communities are able to perform their commitments related to their respective portions of work in a timely and quality based manner;
6. Volunteers have to settle down surely directly on places of implementation of pilot projects, for carrying out work on mobilization of communities;
7. There is a need to improve availability of the service companies to the facilities.

iv) A Specific Story (Optional)

- The Head of the group of the family doctors in Ak-Terek village, Jeti-Ogyuz district, Issyk-Kul region, Ermek Isaeva informed that there are daily electricity cutoffs in the village: from 6 p.m. to 6 a.m. The work of photoelectric station lets assistants in OMP always be ready to help patients at any time of the day. The population of the village is 3.5 thousand people.
“Photovoltaic stations work very well, so there is enough electricity here. We would like to express our gratitude for all of you UNDP, UNIDO, UNV and WHO. Our residents are also interested in installing photovoltaic stations in their homes, but the price is high. ” That obstetrician medical post is equipped with photovoltaic station of 3 KW and with self-powered industrial battery. It provides independent power supply from the facility for more than 10 hours. E. Isaeva said that everyone enjoys the work of photovoltaic station. The population of the village is 3.5 thousand people.
- The Vice Director of the Center of Family Medicine in Kara-Kyungoy village, Kochkor district, Naryn region Damira Altymysheva said that photovoltaic station rescues the medical staff of that village very often. “Everything works, it's excellent provides all the work of refrigerators and equipment. We are tired of common electricity cutoffs in our village. The Photovoltaic Station significantly help us. I've been working as a physician for 32 years. The work with these photovoltaic stations is so convenient, it would be better if such PVS installed in every OMP”. The population of the village is 1,7 thousand people

Problem / Challenge faced: Rural FASs in Kyrgyzstan do not have stable electricity supply.

Programme Interventions: The project installed a renewable energy of independent power supply – the PVS with capacity 1,5 kW on the roofs and 3,0 kW near of rural FASs.

Ak-Terek village



Kara-Kyungoy village



Result (if applicable): After installing the PVS to rural FASs, it is expected that more than 100 000 people including pregnant women and children will have sustainable access to health services.

Lessons Learned: The project disseminates the positive experience to attract potential donors, as well as for the development of the renewable energy market in Kyrgyzstan

v) Resources (Optional)

Financial Resources:

The total Project budget as per 2010-2013 Work Plan was \$ 987 567,18. Thus, the amount allocated for DAO project was the following:

- DAO funds to UNDP+UNV project: \$434 748,42
- DAO funds to UNIDO: \$ 450040 (including 7% support cost)
- DAO funds to WHO: \$211,969

Besides, regular UNDP in kind contribution has been estimated as \$82,840.

Human Resources:

The personnel of the project consist of 5 persons:

- UNDP Technical Specialist
- UNV/Environment Volunteer
- WHO technical consultant
- UNIDO Project Consultant for 3 months
- UNIDO Project Assistant for 3 Months

**The list of Primary Health Facilities for installation of micro hydro (MHP)
• and photovoltaic(PVS) stations**

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- 1.Issyk Kul oblast, Jety Oguz district, Taldy Bulak village (MHP and PVS)
- 2. Naryn oblast, Kochkor district, Kara Kyngoi village(MHP and PVS)
- 3. Osh oblast, Nookat district, Kashkaldak village(MHP and PVS)
- 4. Jalal-Abad oblast, Aksy district, Tashtak village(MHP and PVS)
- 5. Batken oblast, Kadamjai district, Maidan village(MHP and PVS)
- 6. Talas oblast, Kara Bura district, Kok Say village(MHP and PVS)
- 7. Chui oblast, Sokuluk district, Konush village(MHP)
- 8. Chui oblast, Chui district, Alchaluu village (PVS)
- 9. Chui oblast, Jaiyl district, Kojomkul village(PVS)
- 10. Chui oblast, Issyk Ata district, Nijnyaya Serafimovka village(PVS)
- 11. Naryn oblast, Kochkor district, Tulek village(PVS)
- 12. Issyk Kul oblast, Ton district, Kara-Koo village(PVS)
- 13. Issyk Kul oblast, Jety Oguz district, Barskoon village(PVS)
- 14. Issyk Kul oblast, Jety Oguz district, Ak Terek village (PVS)
- 15. Jalal-Abad oblast, Aksy district, Razansai village (PVS)
- 16. Jalal-Abad oblast, Ala Buka district, Bulak Basy village (PVS)
- 17. Osh oblast, Uzgen district, Zerger village (PVS)
- 18. Osh oblast, Kara Suu district, Barak village (PVS)
- 19. Osh oblast, Uzgen district, Arakol village (PVS)