RENEWABLE ENERGY PROGRAM

IN POOR RURAL COMMUNITIES IN GEORGIA, MOLDOVA AND BOSNIA AND HERZEGOVINA

March 1 – June 30, 2020

Implemented by:
Rural Communities Development Agency in Georgia
ACT Ormax in Moldova
Regional Development Service in Bosnia and Herzegovina

CWS
Church World Service

Around the World Week of Compassion Around the Year

PROGRAM SUMMARY

CWS Europe, in conjunction with local partners, is committed to helping people in rural areas gain a sustainable energy supply. We primarily accomplish this by utilizing Renewable Energy Technologies that enable farmers, internally displaced persons, returned refugees, eco-migrants and other vulnerable groups to overcome poverty and build sustainable livelihoods.

This program provides training and resources for families and communities to utilize renewable energy resources and to develop cooperatives and social enterprises. As a result, families can decrease their traditional energy consumption and improve their livelihoods. This project prioritizes participation of women in decision-making processes through women-led initiatives such as cooperatives that improve social infrastructure or support women's skills and abilities to engage in income-generating agricultural production and processing.

The project started on 1 March 2020 and will end on 31 December 2020.

The main project objectives are:

- Promoting and securing renewable, eco-friendly sources of energy for population in need;
- Developing livelihoods and addressing economic needs of rural population;
- Empowering marginalized rural women through establishment of cooperatives based on RET; and
- Assessing the impact of the project, and sharing knowledge and good practices nationally and regionally.

PEOPLE SERVED

A total of 2,465 participated in this program during this reporting period. Of those, 91 were children under five years old. Another 608 people were between 5 and 18 years old. About 51% of program participants were female.

PROGRESS TOWARDS PROGRAM OBJECTIVES

Indicator	Progress to date
# of photovoltaic panels installed (at least 10)	To be reported at the end of the project.
# of mobile solar panels distributed (at least 20)	To be reported at the end of the project.
# of solar water heaters installed (at least 10)	10, so far
# of people trained in use of RET (at least 50)	49, so far (24 men and 25 women)
# of people trained in livelihood related activities (at least 70, out of those more than 50% women)	50, so far (17 men and 33 women)
Inventory of available energy resources completed at least one community in Georgia	Completed in two communities (Magrani and Dusheti)
# of people that took part in awareness raising activities (at least 50)	60 (32 men and 28 women)
At least 20 women employed by the cooperative in Georgia	To be reported at the end of the project.
At least 300 women engaged in cooperative activities in Georgia – directly or indirectly	To be reported at the end of the project.
At least 20 women trained in cultivation of medical and aromatic herbs and management of a cooperative	To be reported at the end of the project.
Plan for placement of wild and medical and aromatic herbs for cooperative in BiH developed	To be reported at the end of the project.
# of people that report savings in their household budgets due to RET (at least 20% of beneficiaries)	To be reported at the end of the project.

CORONAVIRUS UPDATE

All three partners have continued to work despite the COVID-19 pandemic. A variety of measures have been introduced in all three countries including states of emergency, curfews, bans on public gatherings and travel restrictions.

None of the partners experienced major disruptions in implementation of the project, while just a small portion of activities such as trainings and seminars was postponed for summer due to governments' restrictions and recommendation on physical distancing.

The staff was in full capacity and where possible, present in the field. They were taking precautionary measures, and those who were meeting with program participants did so individually in order to minimize the risk of infection and follow the governments' guidelines.

Moldova revoked its state of emergency on May 15. Georgia followed on May 23, and Bosnia revoked its state of natural disaster on May 29.

PROGRAM RESULTS

Objective 1 - Promoting and securing renewable, eco-friendly sources of energy for population in need

Two replicable sustainable green low-carbon footprint model farms were developed in Magrani and Mulakhi communities in Georgia. All the equipment was produced locally in RCDA's centers, except for the biogas digester. The biogas digester's construction required some expertise from abroad, so the process was delayed due to COVID-19-related restrictions. So far, solar water heaters, wastewater filters, solar pumps, fuel-efficient stoves, solar hybrid dryers for fruits and vegetables, animal manure platforms and grey water filters were constructed and installed with active participation of the local households and support from local authorities. It is expected that farms will be fully operational by mid-September.

In Moldova, six solar water heaters were constructed and delivered to six families in Baroncea village during the reporting period. In this way, 24 people benefited from improved sanitation and access to hot water. Preparation work in kindergarten in Ochiul Alb village is underway and the installation of the solar water heaters will be completed in the next couple of months.

In Bosnia and Herzegovina, 16 families from Sanski Most, Kljuc, Bosanski Petrovac, Bihac and Drvar municipalities are receiving solar panels. These will enable access to electricity after years of living without electrical power. In the previous months, all preparation work - connection of each household to a water source (including digging of trenches, water installation in houses, primary toilet equipment purchases and installation, purchase and installation of a water pump) and repair of electrical system in houses has been completed successfully despite the COVID-19 pandemic. At the moment, the project team is finalizing procedure of purchasing panels and it is estimated that the installation should be done by the end of September.

Another 23 families living in remote village of Morina in Nevesinje region in Herzegovina will receive an innovative model of solar panels – mobile solar panels, in smaller dimension, partially portable and could easily be deinstalled during winter when these families usually leave their houses and cottages due to very harsh weather conditions before returning again in early spring. The assessment and preparatory work were completed here, as well, and purchase of mobile solar panels is ongoing. Installation of mobile panels will be completed during the second half of August.

Objective 2 - Developing livelihoods and addressing economic needs of rural population

In Georgia, the following activities were implemented during previous 4 months.

Energy Needs Assessments in two communities of Magrani and Mulakhi took place during the COVID-19 outbreak with active participation of local residents. Due to travel restrictions, the project team was not able to lead the assessments. Instead, the local population provided all required information following the guidance of RCDA. The purpose the assessment is to track energy spending by households and define what interventions are required to support the communities in decreasing energy expenditures. More detailed results will be presented in the final report.

Inventory of renewable energy resources in two communities of Magrani and Dusheti was organized with the aim of defining existing renewable energy resources such as biomass, forest residues, water resources and availability of solar energy based on solar irradiation map. The inventory provided opportunities to start developing communities' Renewable Energy Action Plans and providing opportunities to community members to initiate small businesses based on these resources.

The training on construction and maintenance of cool storage facility based on solar energy had 30 participants (15 men and 15 women) who acquired necessary skills for construction and maintenance of cool storage facility.

The program seminar on fruits, vegetables and herbs drying technologies gathered 30 people (10 men and 20 women) who are now able to share and transfer the knowledge they gained with other interested members of their community.

The program seminar addressing fruit and other crop storing technologies hosted 20 residents (7 men and 13 women) from Kheta, Torsa, and Pirvelimaisi communities who received knowledge in assembling and handling the crops to minimize losses.

All trainings and seminars were organized following official recommendations for prevention of the virus spread. Whenever weather allowed, the trainings were organized outside. When inside, each participant had their temperature checked, received disinfection spray and masks. The participants were seated at a distance of 1.5-2 meters from each other. It should be noted that the beneficiaries were eager to take part in the trainings and meetings once the strict restrictions were lifted.

In Moldova, only one training took place before the pandemic got serious and prompted authorities to declare nation-wide state of emergency and ban on gatherings. There were 19 people (9 men and 10 women) who learned about energy efficiency and innovative technologies based on renewable energy. One more training is planned for August and it will comply with all safety measures including minimum one meter of physical distance between participants and mandatory mask wearing.

Objective 3 - Empowering marginalized rural women through establishment of cooperatives based on RET

A women's cooperative in the Kheta community in Georgia was supported under the previously implemented CWS project, in which 17 women from the community were hired. In this cycle, the cooperative was further developed with provision of a 32 square meter solar powered cool storage facility with capacity to store 12 tons of crops. The cool storage facility will provide the opportunity to local women to store good quality fruits like kiwi, lemons, oranges and mandarins over period of two to five months depending on the product and sell off-season when the prices are higher at a factor of 100%, thus gaining additional income. The cool storage facility combined with the solar drying system is an excellent opportunity for local poor households to decrease the loss of crops and gain additional income and stimulate further expansion of local production. The cooperative will provide jobs to 35 women and young people and involve over 300 people, including 80% women, in the community and from adjacent villages in collection/harvesting and storing of fruits and NTFPs. The established enterprise can be viewed as model of community based, community owned enterprise that utilizes renewable energy resources for the production process and showcases the transition from conventional economy to bio-based economy.

In Bosnia and Herzegovina, the goal is to empower women, who are already gathered in a dairy cooperative in Bosanski Petrovac region, to upgrade existing and launch new commercial activities that will provide economic stability for their families. Additionally, the aim is to increase areas planted with medical and aromatic herbs, as well as to create additional value by processing harvested plants in solar dryer. The pandemic and resulting ban on group gatherings delayed envisaged activities – trainings and expert visits. Delayed activities will take place in late summer and early fall, with all precautionary measures in place such as wearing masks, providing disinfection sprays and making sure that participants respect physical distance.

Objective 4 - Assessing impact of the project, sharing knowledge and good practices nationally and regionally

Awareness raising seminars in two communities of Magrani and Mulakhi were conducted prior to the coronavirus outbreak in Georgia. The aim was to create understanding of local people, government representatives and local authorities on linkages between sustainable energy, environmental protection and sustainable development and assure support of local authorities in utilization of RET resources. 60 people took part in the meetings (32 men and 28 women).

In order to present the program to a wider public and raise awareness about RET, radio “Atinati” in Georgia broadcasted a program about the technologies and benefits to rural communities. According to estimates provided by the radio, some 7,000 people were reached.

In Moldova, the project team is working on the Ecotehnologia bulletin no.8. In this edition, more information will be provided on the methods of preparation and adaptation to climate change and poverty reduction through use of RET. This year’s edition will be published in English and Romanian languages. The bulletin will reflect the accomplishments of the given project and will be distributed to all ministries and relevant agencies, funding organizations, local public administrations, town halls, local, national and international NGOs, farmers and local public electronically through social networks, email lists and other. The bulletin will be published in October or November 2020.

ANALYSIS OF PROGRESS

The coronavirus pandemic that erupted worldwide created great uncertainty in the rural and urban communities in the entire region. This unprecedented situation, limitations on the activities imposed by the emergency conditions and enforced curfew in all three countries where project is implemented, had a substantial impact on our ways of life and societal models. Poverty, lack of access to basic essential services and decent living conditions were all factors likely to increase vulnerability of population faced with health and epidemiological risks in the project areas as elsewhere in the countries. Continuing the project was therefore a necessity, both for our local partners and target communities suffering from the economic crisis and now under a new threat to their health. To do this, several measures – adapted to each context – have been implemented.

In Georgia, a Rapid Beneficiary Survey[1] on COVID-19 was undertaken by Khamiskuri Water Sanitation and RET Center to find out how the people in target communities are protecting themselves from the virus that helped to identify priority areas of interventions and redirect project activities.

Field activities considered risky have been postponed[2] or modified[3], while mobilization of local partner networks and use of digital tools made it possible to quickly and comprehensively convey information on prevention and awareness-raising and continue project activities while respecting state's response plan. The project rearranged the activities in a way that it didn't affect the project implementation and all the planned components of the project have been delivered and milestones met.

Moldova saw similar restrictions as Georgia. One training planned for spring had to be postponed to summer due to a complete ban on public gatherings during that time. The training will take place in August with respecting the rule of at least one meter of physical distance and mandatory mask wearing. In case of sudden worsening of the situation and new peak in number of cases, the training will take place online. Out of 10 families who were to receive solar water heater packages, two gave up from participation in the project citing situation with COVID-19 as the reason for their expedited immigration to Russian Federation. In the meantime, CWS's local partner ACT Ormax got a request from a local canoe club that provides free trainings for poor and children from vulnerable families, about possibility to receive solar water heaters for their bathrooms. Ormax responded positively[4] and installed the two solar panels that would have

[1] Most of surveyed people are aware of COVID-19 pandemic and impacts it can bring. People know how to follow sanitary and hygienic norms, take more care about hygiene in the living areas. Some complained of lack of availability of safe drinking water. Questions were asked about possibilities for training them on organizing water and sanitation facilities. In general, it could be concluded that people are respecting the rules of protection from COVID-19 pandemic.

[2] RET demonstration days; Exposure visit of 10 representatives from Magrani and Mulakhi communities to Women's cooperative in Kheta

[3] Energy Need Assessment

[4] Ormax budgeted these two panels to Urbis Foundation, co-funder of this year budget and requested an approval for this change from them, Funds of the Week of Compassion budgeted for this purpose will be used for the construction and installation of the two remaining solar water heaters for families.

gone to the two families who quit the project. Now 38 young people now have access to hot water and improved sanitary conditions.

Rural areas of Bosnia and Herzegovina were less affected by the COVID-19 pandemic than the rest of the country, resulting in almost uninterrupted implementation of activities. The beneficiaries are living remotely with less risk of contagion and all preparatory work is mostly done outside where it was easy to comply with physical distancing. However, the trainings aimed at developing capacities of women from a local cooperative had to be postponed – small town of Bosanski Petrovac where the cooperative is located had a number of coronavirus cases, so the project team decided to reschedule the trainings for later when situation improves. At the moment, it is allowed to gather up to 100 people inside with respect of physical distance. Alternatively, the trainings will take place in smaller groups (5-10) people or in case of drastically worsened situation, they could be organized individually with one woman and her family at a time.

In all three places, adjustments were made: purchasing necessary equipment and materials, communicating with beneficiaries via phone and digital technologies, and meeting individually.

Curfews and states of emergency are no longer in place in any of the three countries, with Georgia having the least infected people among them. No restrictions of movement are expected anymore, while large public gatherings are still prohibited. If the situation remains similar in the following months, the expectation is that all remaining activities will be implemented as planned.

MONITORING AND EVALUATION

At the start of the project in Georgia, a participatory needs assessment and baseline study were conducted which enabled the project team to assess the potential for economic benefits and scaling up, self-reliance and self-organizational capacities of the community members involved. Baseline information was prepared on employment, incomes, agricultural production, gender, and existing renewable energy resources. This inventory of renewable energy resources in the communities was an important prerequisite for defining the existing renewable energy resources and based on this, our local partner RCDA, in close cooperation with local authorities, has started working on community development plans that ensure sustainable use of natural resources and new business and income generation opportunities for local people.

Energy Needs Assessment with purpose of tracking energy spending by households was undertaken to define what interventions are required to support the communities in decreasing energy expenditures and develop sustainable small-scale businesses based on RER (Renewable Energy Resources).

From the beginning of the project, target groups fully participated in the design and implementation as well as in monitoring and evaluation processes. This guarantees project ownership to the greatest possible extent. The sense of ownership was the sound basis for community contributions to the project activities.

Initially, Moldovan partner ACT Ormax assessed potential beneficiaries and those who could meet certain criteria were selected to participate in the project. The criteria included interest in the project, active participation in trainings, sharing knowledge and gained skills with other members of the community, managing the equipment according to instructions and be willing to contribute their own material resources into project – for example, in construction material needed for prep work, etc. Later on, the project team conducted two monitoring visits to families.

In Bosnia and Herzegovina, data was collected from all 39 families receiving photovoltaic systems through a survey. Our local partner collected data on monthly revenues of beneficiaries and monthly costs that are a direct consequence of the lack of electricity. This data is important in order to compare it with those to be collected at the end of the project and thus show the impact of the project.

LESSONS LEARNED

The project is based on previous activities and experience of CWS and its local partners in the Balkans and Eastern Europe that are focused on enhancing access of rural households to clean affordable energy, mitigate climate change impacts, build the resilience of communities, provide employment and income generation opportunities, and improve livelihoods in general.

Two years ago, CWS organized a meeting of its RET partners to support shared learning and exchange of ideas. This was an excellent opportunity for our partners from Moldova and Bosnia and Herzegovina to get familiar with technologies produced by RCDA from locally available materials at much lower costs. This was especially useful for our Bosnian partner, RDS, that uses (due to requirements of other co-donors) industrially built photovoltaic systems, which are much more expensive. After the visit, the team in Bosnia partnered with a local organization, Centre for Development and Support from Tuzla, that trained six local craftsmen and laborers (three from Bosanski Petrovac, three from Drvar), now part of RDS's team, to construct solar panels, solar warm water collectors, and solar fruit dryers locally. The technologies were successfully piloted in last year's project cycle in kindergartens.

All this led to development of first ever made and thus experimental system (a mobile photovoltaic system - package) that can cover and power basic needs such as lights, TV and radio. This is an important milestone for our local partner because it is the first such panel locally produced. An improved and stronger version of this panel now became part of the CWS project and is installed in 23 houses in remote village of Morina in Herzegovina region.

All photos from ACT Ormax in Moldova.