

RECP GREEN CLUB REPLICATION STRATEGY IN NEW REGIONS OF ARMENIA

GREENING ECONOMIES IN THE EUROPEAN UNION'S EASTERN NEIGHBOURHOOD (EaP GREEN) PROGRAMME

UNIDO RECP Demonstration component



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Small and Medium Enterprises (SMEs) are considered as priority for job creation and overall development of Armenian economy. The Government of the Republic of Armenia performs continues steps towards the development of SME sector, particularly towards the direction for creation of state support system for promoting innovations in SMEs. The aim of the national policy is to utilize the potential of SMEs in the context of economic, social and political development of the Republic of Armenia and enhancement of sustainability of its ecosystems. This is the reason why the country, population at large, including SME and private sector companies are first beneficiaries and stakeholders of RECP mainstreaming. Government and decision-makers are stakeholders and beneficiaries as well, since environmentally friendly business development, reduction of waste, recycling and management of waste, sustainable use of natural resources do not necessarily mean stopping economic development. On the contrary, the country can significantly benefit from cost reduction, energy saving technologies and innovative solutions suggested by RECP,

where individual approach to the company's needs is increasing its productivity, effectiveness and improved quality of services and products.

Armenia's economy and technologies used in the industrial sector are characterized by high energy intensity and resource consumption, which are significantly higher than the similar indicators in developed countries. This situation is on account of low energy efficiency in energy intensive industrial sectors due to the worn-out outdated production facilities and limited use of energy saving technologies and processes, as well as the absence of the necessary monitoring and control of the use of energy carriers. Here RECP plays a key role since it includes not only energy saving options, or energy reduction methodologies and solutions, but also has a comprehensive approach to the general performance and resources, production cycles for each industrial process.

More specifically, the promotion of RECP and innovations in SMEs through scaling up of resource efficiency and clean energy technologies is important to Armenia for the following reasons:

- Armenia imports nearly two-thirds of its energy need, mostly from a limited number of foreign suppliers. Electricity demand is expected to grow two to three percent annually. Armenia will have to invest significantly in new generation capacity and rehabilitation of existing capacity in order to continue to meet consumer needs.
- A number of thermal power plants have been closed and one of the two reactors at the Metsamor Nuclear Power Plant (NPP) has been shut down. Power generated from the Hrazdan-Yerevan and Vorotan Hydro Power Plant cascades remains an important power source. Hydropower is responsible for approximately one-third of the total power generated in the country.
- Armenia's renewable energy potential offers a number of strategic advantages and market opportunities. Currently, Armenia uses renewable energy based on hydropower, which meets 30 percent of the country's electricity needs and benefits from existing tax and tariff incentives. It is likely that similar incentives will be made available to project developers in solar sector. Research and development in solar technology is at an

advanced stage and the current goal is to create a manufacturing infrastructure for domestic consumption and an export industry for PV panels.

- Huge potential of energy efficiency, renewable energy and waste-to-energy technologies is yet to be realized in the SME sector, which would make energy intensive manufacturing SMEs more productive and competitive in addition to significant reductions in GHG emissions.

Another reason why RECP should be promoted and adopted at the state level is the non-effective waste management and recycling system existing in the country. Solid waste management is non-consistent, the amount of landfills is completely inadequate, waste is not separated and is not recycled: this tendency is exacerbated with inefficient waste collection system and illegal waste pick-upers who are actually developing shadow economy, within anti-sanitary conditions threatening health and environment of the population. RECP is a solution which can not only help SMEs within certain industries to think about innovation and waste recycling, but also serve as a good platform for establishment of waste recycling industries and companies, which would collect certain type of waste and produce new products.

All industries which have already received RECP service packages can benefit from further RECP measures and continuous monitoring. One of the most important achievements as a result of RECP implementation is undeniable possibility for all companies to reduce their energy costs and water demand.

The RECP Green Club work stream under EaP GREEN is aimed at developing and piloting a lean support model for enterprises, in particular smaller businesses. The model was created as a scale-able and replicable model, after initial trials in two regions it was replicated in two more marzes/regions of Armenia and was made available on a continuous basis to more regions.

RECP enables SMEs with an easy to read guidance for RECP implementation in business sector, enabling reduction of production costs and technological needs; increase in labor productivity, possible improvement in product quality; reduction of costs associated with waste production and pollution; improvement of production conditions, reduction of energy

and material losses and better housekeeping and management practices improving environmental compliance of the business sector.

Based on estimates made by the expert group, recommendations were drawn up on the basis of investment opportunities; RECP has provided companies with following results:

- Reduction of total energy use- 398,000 kW
- Total reduction of material used- 340 tons
- The total volume of water use reduction - 426,000 tons
- General waste reduction- 210 tons
- The total reduction in carbon dioxide -125 tons

RECP Mainstreaming through Green clubs

Each Green Club provides practical RECP support to some 8-10 small enterprises. Upon completion of the Club programme each member enterprise would have developed an actionable RECP plan and have started with its implementation. The action plan was developed and put in place on a modular, thematic basis. Each theme/module was introduced during a 2-3 hrs how to workshop that ended with practical guidance for member enterprises to apply. The following workshop, enterprises report back on experiences (fostering collective learning) and were introduced to the next topic. A total of 6 modules were foreseen, and delivered with intervals of about 3 weeks over a period of about 4 months. Upon completion of the action plan, the 'hosting' organization (municipality or other regional or local authority) could present a certificate of completion, which could then also be renewed annually if enterprises continue to improve their environmental initiatives.

The modules were organized by thematic areas in the following sequence:

1. Business Profile: profiling of the enterprise with a particular focus on identifying resource uses and environmental impacts and appraising these in both physical units (tons, kWhr, etc.) as well as their monetary value (input costs and non-product output costs);
2. Energy: understanding energy use in company and developing energy efficiency options for processes, utility systems and buildings management;
3. Materials and Waste: understanding main material flows in enterprise and associated waste streams, and developing materials efficiency and waste reduction options;

4. Water and Waste Water: understanding main water flows in enterprise and associated waste water streams and developing water efficiency and effluent reduction options;
5. Chemicals, Hazards and Emissions: understanding chemicals use and associated hazards and emissions, and developing options for sound and responsible chemicals use; and
6. Action Planning: bringing together options from different topics into an integrated approach for enterprise with short, medium and longer term goals and actions.

Modules 2-5 form the core and focus on the enterprise's technical processes, whereas module 1 and 6 provide introduction and capstone respectively and are focused on management and information systems. Current cycle of RECP in Armenia is actively working with SME sector in the regions through advancing RECP methodology and application via RECP Green club component in pilot Ararat Dilijan, Hrazdan and Vanadzor cities of Armenia. The project has been planning a new potential locations for Green club establishment, which was planned for further replication of current RECP approach in the regions where inclusion of local SMEs dealing with food, beverage, construction and chemical production, as well as new industry sectors including tourism, carpet and textile production, as well as other industry sectors will be included for further inclusion into RECP assessment cycle. Project has received series of suggestions to try inclusion of farms and farmer associations, where RECP could potentially be used for production of biogas. Other options like improved performance and economic benefits, innovative ideas for waste management and recycling, reduction of energy costs will also be considered.