

Coaching Program on RECP for RECP experts and Demonstration companies Armenia

I. Objective and general scope

The coaching program on RECP implementation is developed under the EU4Environment project. The general objective of the **coaching programme** is to extend capacity on RECP methodology and practices among experts and demonstrate its implementation in 15 companies. The program will engage **10 RECP external** experts and the staff of 15 demonstration companies with a coaching process on RECP to assist them in carrying out RECP assessments and developing RECP action plans that leads companies to improve efficiency and environmental performance.

The NIP (Regional environmental center for Caucasus) will provide substantial coaching on RECP methodology and techniques to the RECP experts during the assessment delivery to companies and will manage general planning, coordination and report delivery. Two NIP Technical Experts will deliver technical advice on specialized subjects to RECP experts/companies, ensuring a combination of energy efficiency and sectoral expertise.

The program envisions 2 levels of assistance:

- **Coaching programme for RECP experts:** It will be structured in training sessions and continue assistance from the NIP's technical advisors during the assessment in companies. The training will be divided in 4 half-day sessions, with three modules per session. Sessions will also be enriched with Armenia's RECP related experiences and case studies (covering energy efficiency, waste, recycling, water use, environmental management systems (EMS)).
- **Coaching programme for Demonstration companies:** It will be structured in several sessions per company organized by RECP experts. Those sessions will be interspersed with on-site visits for data collection and analysis.

The main contents of the coaching program (a list of topics) for reference is described in chapter IV. The RECP methodology's subjects will be addressed following the general structure of the UNIDO CP Toolkit as described in the TOR, and will be enriched from the NIP's experience and the updated training material developed by UNIDO international experts for EU4Environment. Additionally, NIP will identify **three advanced RECP topics (in at least 3 areas)** to complement the provided list keeping an adequate balance of contents necessary for good quality assessments. Final coaching program design will be supported by UNIDO's international expert(s) and delivered by the NIP advisors and RECP experts.

II. Coaching program modality description

The coaching programme will build on existing knowledge on RECP bringing in the best international practices to be used and adapted to the local context. The NIP's team will also identify advanced RECP topics as per selected needs of the local experts and SMEs involved in the RECP assessment process. The programme will be designed in collaboration with UNIDO international experts (English language) and NIP advisors (delivering in national language), it will be approved by UNIDO and implemented with the local experts as per the work plan schedule. Coaching will be implemented further on by NIP experts, who will assist SMEs in identification of RECP options for each SMEs, development of action plan and priorities targeting resource efficiency, and implementation of suggested audit recommendations. UNIDO's training kit on RECP will be used as a reference material for this task. The team will enrich the kit with national business cases and Green Club Rapid assessment catalogue elaborated in 2017, based on recommendations of the international coach.

The final expected result of the RECP assessments will be the RECP saving catalogue supported by the developed analysis, and the RECP action and monitoring plans for each company. All this information will be documented in a full in-plant-assessment report per company. The Saving Catalogue will contain a. Root/cause analysis. b. List of RECP measures to reduce inefficiencies, data validation and selection of the final list of RECP measures. c. Technical, economic and environmental feasibility evaluation of the selected RECP measures.

Each RECP assessment will contribute to the establishment of capacities in companies for RECP adoption as a necessary strategy for business growth, and will be conducted by exchange between RECP experts and the company RECP team during the assessment activities.

NIP advisor team will provide substantial coaching on RECP methodology and techniques to the RECP experts during the assessment delivery to SMEs, will manage general planning, deliver technical advice on specialized subjects to RECP experts/companies, ensuring a combination of energy efficiency and sectoral expertise.

2.1 Coaching program delivery phases

The coaching modality consists of 2 levels of assistance which in turn are designed to deliver a systematic process to strengthen capacities in both local experts and companies staff. The first level addresses assistance to selected RECP experts to gain more experience in conducting RECP in-plant-assessments and leading companies in resource efficiency adoption. NIP's advisors supported by UNIDO will provide methodological support and technical advice to these experts during their performance. The second level is the detailed job of the local experts conducting the RECP assessments and creating capacity in company staff. This process will be developed in the following phases:

- **Preliminary mapping of potential companies:** the coaching program will cover 4 regions (locations) of Shirak, Kotayq, Gegharkunik and Yerevan, where preliminary mapping has already been done based on available data, industry presence and identified industries. A list of 18 companies has been identified following sector prioritization. See chapter III.
- **Preparatory training sessions with RECP Experts:** 10 experts are being recruited to be the technical advisors for conducting RECP in-plant-assessment in companies. Professionals with previous experience in service providing to industries will comprise the group. Therefore, preparatory training sessions (4 half-day workshops) will be delivered to homogenize knowledge and the methodology to be used for the assessments.
- **RECP in-plan assessment in demonstration companies:**
 - **First phase:** It will include presentation and coaching on the basic RECP concepts (2 visits per company, for 10 experts and 15 SME representatives).
 - **Second phase:** During this phase, NIP's advisors (coaches) will continue coaching the RECP experts in parallel with SME assessment cycle. This phase will comprise targeting demonstration industries and subsequent RECP experts' distribution to develop their assessment tasks per company. Coaches will accompany this process carrying out 5 visits for 5 locations comprising 15 demonstration companies.
 - **Third phase:** It will cover final coaching sessions in five locations covering subjects beyond RECP methodology to complement capacity building in local experts and companies that allow them to continue working for more sustainable production models. NIP's coaches in coordination with UNIDO will **identify three advanced RECP topics (in at least 3 areas)** to

complement the basic RECP topics keeping an adequate balance of contents necessary for good quality assessments.

Overall, the NIP's coaches will deliver 12 workshops including the initial four training sessions to RECP experts and the rest as the assessments in demonstration companies go along.

During the assessment cycle conducting by RECP experts in demonstration companies, the RECP experts will implement a capacity building process with the company staff. The following strategies will be followed:

- **Training of company team leaders:** Company's representatives selected as the RECP team participate in training workshops delivered by the RECP experts that cover concepts, practices, and methodological approach of RECP. Through these workshops, companies receive the basic knowledge to support/conduct RECP assessment in their process, assisted in this case by external experts. The in-company training workshops will follow an adapted version of the RECP Clubs material designed for EU4Environment. See chapter IV.
- **Specific technical assistance through the experts:** each company is assisted by a technical advisory team comprised of 1-2 experts per company. Specific sectoral expertise can be added on ad-hoc basis for specific subjects that might arise during the in-plant-assessment.

The core activity during assessments is the **technical assistance to be provided by RECP experts** which will conduct the assessment and coach the company team participation to maximize empowerment, quality results, and generation of feasible actions plans that can be implemented by the company.

III. Target sectors and potential companies

The following industry sectors were selected for potential RECP assessments within EU4Environment RECP component.

- **Plastic production**
- **Fish production**
- **Food and agricultural processing**
- **Metal processing**
- **Chemical production**
- **Recycling/Waste**
- **Textile**

Plastic and fish production were identified by the Government of the Republic of Armenia during the project elaboration, prioritized in the EU for Environment Work Plan document in 2019. Current List of Demonstration companies covers SMEs from both sectors (producers of Plastic goods, companies “ Proper Plastic” (plastic recycling, delivering sustainable design products from HDPE / 02 plastic), “ArmPlast” Ltd. (engaged in the HDPE, PP, PS, LDPE plastic and polyethylene recycling), "Cleanland" LLC (recycles PET plastic bottles), “ARMENIA PLAST" company (Polyethylene bag manufacturing enterprise, production of polyethylene bags, containers) and OLYMP Expo (manufacturing of polyethylene bags/ polyethyl) are included in the list. There are two companies representing mixed production of paper, plastic goods production, and recycling of wastepaper "Vazgen Abgaryan" LLC and another company producing both plastic bags, self-adhesive tapes, napkins “Scarlet LLC”.

Also, from the **Fish production sector**, there are two companies selected from two different regions to follow up on Governments' second priority sector inclusion "**Khayts Ishkhan**" Co.Ltd (fish farm, catering, production and export of caviar) and "**Sevani Ishkhan**" (recycling and sale of Gegharkunik and Summer trout subspecies, production of wide range of fish products fresh, frozen fish canned fish).

In addition to the abovementioned sectors, project has selected industries with significant economic and industrial potential for Gyumri (Shirak Region), which is a **textile production**.

Food and agricultural processing has been one of the most promising economic potentials from the perspective of economic development, and has a good potential for **“Recovery and recycling of organic waste (biogas, fuel, by products), sterilisation and pasteurisation, concentration, cleaning, CIP, as well as savings in water and energy sectors”**, in line with recommendation of **Technical report** on **“ Sectors and Training topics, first draft: ARMENIA ”** by EU4Environment. **Metal processing**, recommended by the same Technical report, was also included in the list of SMEs (**"Magnon" OJSC, Metal Products Manufacturing**) and **“Turvand” LLC (Metal-plastic products production)**.

The list is enriched with other companies, which represent a good mixture of industries of chemical and plastic production, recommended by the Technical report, and has good potential from the point of view of RECP, such as “Ameska” Tire Recycling Company (tire recycling which results in technical carbon, diesel fuel and scrap metal). The company interesting also due to the produce, such as processing of used oils, plastic waste, bags, containers (polyethylene), cartridges, files and other solid office waste, banners (polypropylene), home appliances (polystyrene).

Project has targeted regions where no RECP demonstrations were conducted during the previous project: those are Shirak, Gegharkouniq, Kotayq and Yerevan.

IV. Coaching workshops.

4.1 RECP subjects covered by the coaching program

Coaching modality is based on the following principles as **focus of the assessment at company level**.

1. **Five common generic techniques for implementing RECP include:**
 - Management and labor: Improved housekeeping practices
 - Waste reduction
 - Raw material substitution
 - New technology
 - New product design
2. **Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles:**
 - Design out waste and pollution
 - Keep products and materials in use
 - Regenerate natural systems.

4.2 Preparatory workshops with RECP experts

Training and coaching on RECP assessment methodology will follow the general structure of the basic RECP training toolkit (see reference content in annex 1). The background material and teacher’s notes are helpful tools for the trainer during training sessions or technical assistance at company level.

The Expert’s notes and background material are based on the long-term experience that RECP experts have acquired throughout implementation of other RECP/CP projects in different industrial sectors.









Training modules are divided as follow:

- **Module1.** International and national context
- **Module 2** Introduction to RECP - CP Basics - Eco-design/Life cycle analysis
- **Module3.** Team, policy, motivation
- **Module4.** Material flow analysis

- **Module5.** Energy flow analysis
- **Module 6.** Innovation, creativity and option generation
- **Module7.** Chemicals and hazardous materials.
- **Module8.** Indicators and environmental controlling
- **Module 9.** Waste management and recycling
- **Module 10.**RECP Audits and final reports
- **Module11.** From RECP to EMS and CE

The following table shows the tentative agenda of the four preparatory training sessions. These sessions will be delivered during a period of one month before the demonstration assessments start in companies.

Table 1. Tentative agenda of preparatory training with RECP Experts

Day		1-half day	2-half day	3-half day	4-half day
Time	9:00	Registration	Registration	Registration	Registration
	9.30	Welcome, introduction of participants, and background of the project Module 1: International and national context	Module 4: Material flow analysis	Exercise 4 (continuation - plenary)	Module 10: RECP audit steps and reporting
	10:30				
	10:45	Module 2: Introduction to RECP - CP Basics - Eco- design/Life cycle analysis	Exercise 3	Exercise 5	Module 10 (continuation)
	11:15		Module 5: Energy flow analysis	Module 7: Chemicals and hazardous materials	
	12:00	Exercise 1			
	12:30				
	13:00	Module 3: Team, policy, motivation	Module 6: Innovation, creativity and option generation	Module 8: Indicators and environmental controlling	Overview of coaching material for in- company meetings and report template
	13:30 - 14:00	Exercise2	Exercise 4	Module 9: Waste management and recycling	

4.3 Coaching workshops with companies

The first phase of the work with companies will include presentation and coaching of the basic RECP concepts (2 visits for 10 experts and 15 SME representatives). The second phase will continue coaching programme in parallel with the SME assessment cycle during which NIP's coaches will accompany through 5 locations and 5 visits, comprising 15 demonstration companies. During this phase, the RECP Experts will coach companies' staff members from the updated RECP Clubs methodology of the EU4Environment project to engage company teams with the assessment process and identify improvement measures.

		Discussion	Discussion	Discussion	Discussion	Discussion	Discussion
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Table 3. Modules description of the RECP training program for SME representatives (by RECP experts) - Better Business – Cleaner Environment – Green Economy

http://recp.am/wp-content/uploads/2017/02/Workbook_update_2016.pdf

Module topic	Module context description
<p>Module 1. Business Environmental Profile - Profiling the enterprise with a focus on identifying resource uses and environmental impacts and appraising these in both physical units (tons, kWh, etc.) as well as their monetary value (input costs and non-product output costs).</p>	<p>Worksheet #1 “Profile”, Introductive Part: “General information” This section offers the framework for the establishment of the company’s baseline profile and data collection. Based on preliminary analysis of the physical quantities of materials, economic value, and its environmental impact, the main environmental priorities are identified. Data collection at company level is the central point of this phase and it will be used as reference for the next self assessment worksheets on energy, water & wastewater, materials & waste and chemicals & hazardous waste.</p> <p>Exercise 1.</p>
<p>Module 2. Energy - Understanding energy use in company and developing energy efficiency options for processes, utility systems and buildings management.</p>	<p>Worksheets #2 “Energy”. Mapping and quantification of users (processes, activities etc.) of different types of resources and compare their theoretical consumption with actual use.</p> <p>Exercise 2.</p>
<p>Module 3. Water Efficiency and Wastewater Reduction- Understanding main water flows in enterprise and associated wastewater streams and developing water efficiency and effluent reduction options;</p>	<p>Worksheets # 3 Mapping and quantification of users (processes, activities etc.) of different types of resources and compare their theoretical consumption with actual use.</p> <p>Exercise 3.</p>
<p>Module 4. Material Efficiency & Waste Minimization - Understanding main material flows in enterprise and associated waste streams, and developing materials efficiency and waste reduction options;</p>	<p>Worksheets # 4 Mapping and quantification of sources of effluent, waste and emissions, and factors that influence their generation.</p> <p>Exercise 4.</p>
<p>Module 5. Chemicals & Hazardous Waste and Emissions - Understanding chemicals use and associated hazards and emissions, and developing options for sound and responsible chemicals use.</p>	<p>Worksheets # 5 Total resource use (input) and total waste and emissions generation (non-productive output) – the data is transferred from Part 1 “Environmental profile” (type, physical unit, annual physical use, annual cost, principal uses and main sources for waste and emissions generation).</p> <p>Exercise 5.</p>
<p>Module 6. Action Plan- Bringing together options from different topics into an integrated approach for enterprise with short, medium and longer term goals and actions.</p>	<p>Worksheet #6 “Action Plan” outlines the RECP options catalogue and categories of tasks associated to each RECP option, as well as their economic and environmental benefits, deadlines for implementation and responsible persons.</p> <p>Exercise 6.</p>

V. Organization structure

According to the strategy described in preceding chapters, the project team has the following organizational structure:

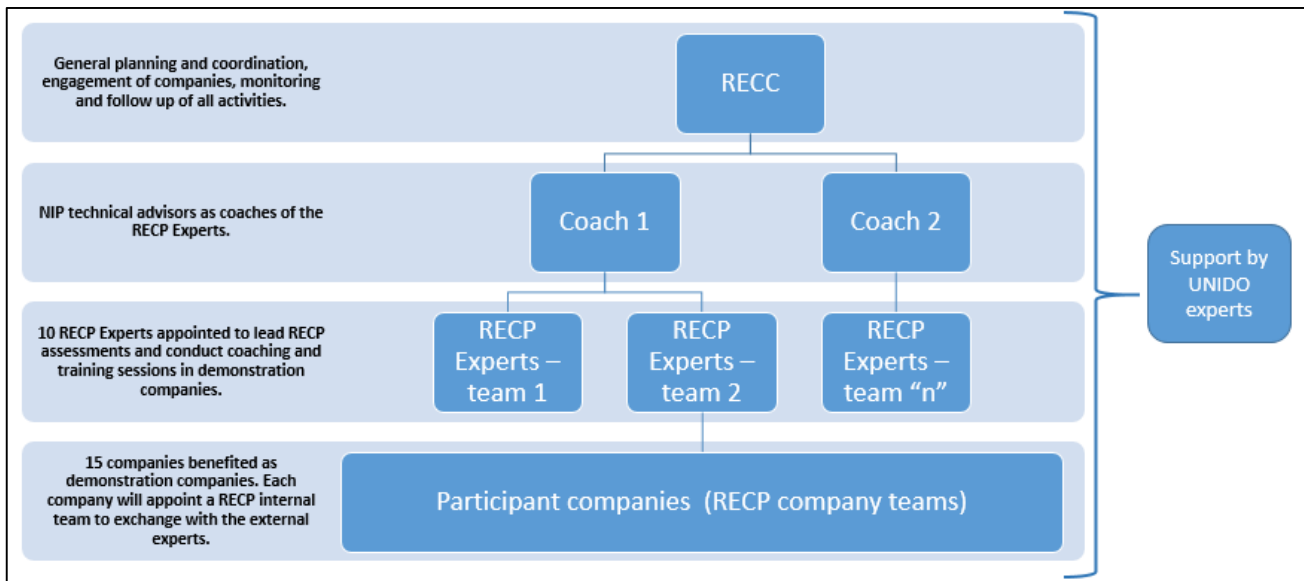


Figure 1. Organizational structure

Planning and organization process of the RECP assessment cycle in companies involves the following steps:

- Organization of company project team (RECP company team)
- Initial walkthrough to collect first ideas
- Develop a process flowchart and identify inputs and outputs
- Identify baseline: Quantify inputs and outputs
- Pre-assessment to set priorities
- Set priorities according to volumes, cost of waste and emissions, and risks
- Develop initial program
- Detailed assessment and option generation in relevant areas
- Options evaluation (technical, economic and environmental feasibility) and programme
- Action plan
- Implementation

NIP will conduct RECP assessments in 15 new demonstration companies following this general cycle. New experts will work in a team with EaP Green experts, and NIP technical advisors team both on capacity development and RECP assessment components. They will also be collaborating in development of Monitoring Master Plan, participate and present their business cases during project events, RECP national conferences, alumni events, etc.

RECP External experts will prepare the following reports per company:

- Specific work plan agreed with the company team to conduct training sessions and visits.
- Progress report of the RECP assessment (according to activity 2.6, and D2.6 of the NIP's terms of references).
- Final RECP assessment report, including results of the assessment, saving catalogue of the RECP measures, action plan (according to activities 2.6, 2.7 and D2.7 of the NIP's terms of references)

After the RECP assessments are finished and companies have their RECP assessment report and action plan, a monitoring phase will begin. A monitoring plan will be drafted and monitoring visits will be conducted to all

participating companies (**Activity 2.8, and D2.8, D2.9.**) to evaluate and document the RECP implementation results.

Follow up of RECP teams in companies to support the identification of finance needs will be done by Business and Finance development expert. This shall be organized for at least 10 enterprises showing interest in implementing RECP measures using their own and borrowed funds (**Activity 2.9**). This task shall include the identification of sources of financing as well as support in the preparation of loan applications to financial institutions, **as per request of the company.**

VI. Timeline

The coaching program, from the RECP expert team formation until finalization of the RECP assessments and action plan, is envisioned for 8-month period. The following charts show the sequence of described activities. Due to COVID19 situation, the specific starting date of the RECP assessment cycle in companies (figure 2) will be confirmed upon consideration of mobility limitations and companies’ availability.

Figure 2. General Timeline of the coaching program (to be adjusted considering COVID19 context)

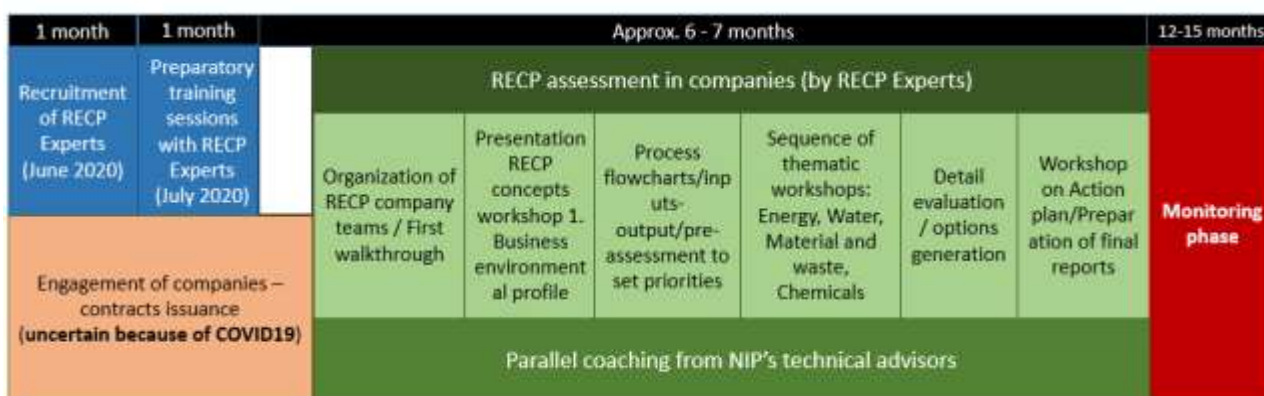
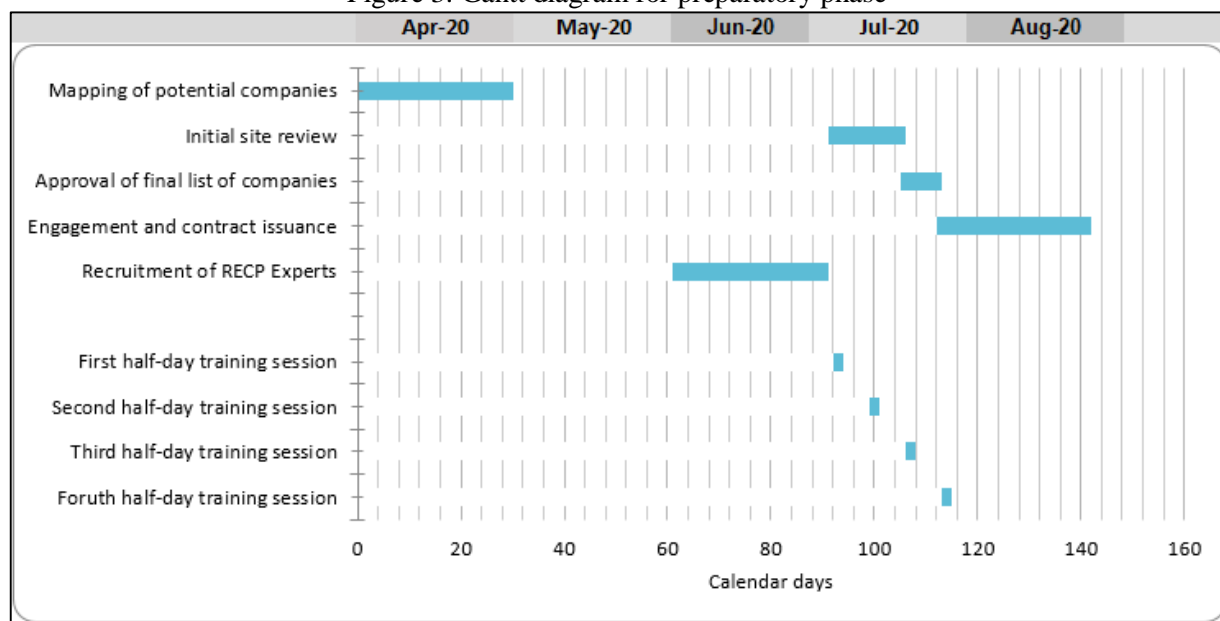


Figure 3. Gantt diagram for preparatory phase¹



¹The chart shows the general duration of project tasks. All activities’ duration will be adjusted according to COVID19 situation.

Figure 3. Tentative Gantt chart for RECP assessments cycle in companies²



² The chart shows the general duration of project tasks. All activities' duration will be adjusted according to COVID19 situation

VII. Annexes.

Annex 1. Reference content of the Basic RECP training/coaching program³

1. International and national context: global environmental problems, contributions from the industry, environmental and social risk from national industry performance.

2. Introduction to RECP

- Definitions (waste, emissions, etc.);
- Traditional environmental management versus a more holistic approach;
- Interrelations between raw material, production process and waste/emissions;
- Factors influencing the generation of waste and emissions (where to start from);
- Data collection as a basis for the minimization of waste and emissions;

3. Team, policy, motivation

- Anticipation of counterarguments (cons) and obstacles;
- Reasons for the establishment of an environmental task force, environmental representative and environmental team;
- Motivation of the workforce;
- Description/analysis of the current situation: weak points and strong points in terms of environmental performance;
- CP: a sound foundation for an EMS;
- Definition of an environmental policy.

4. Material flow analysis

- What is a material flow analysis?
- How to carry out a material flow analysis?
- Cases studies
- Material flow analysis for water.
- The use of data sheets.

5. Energy analysis

- Main components of a corporate energy system
- Data collection and energy saving potential
- Energy data - Specific energy consumption – benchmarks
- How to interpret weekly/daily statistics.
- Conversions.
- Distribution.
- Consumers.
- Heat recovery
- Typical areas with high potential for optimization.

6. Innovation, creativity and option generation.

- Creativity and the thought processes.
- Innovation, creativity methods and techniques.
- CP option generation.
- Evaluation and feasibility study.
- Technical, environmental and economic evaluation.

³<https://www.unido.org/resources/publications/safeguarding-environment/industrial-energy-efficiency/cp-toolkit-english>

7. Introduction to green procurement and hazardous materials.

- Introduction to green procurement in companies,
- Introduction to Hazardous materials
- Introduction to Sustainable Chemicals Management

8. Indicators and environmental controlling

- What does "environmental controlling" mean?
- Environmental information system and the use of indicators.
- Organization for environmental controlling.

9. Waste management

- Analysis of the waste management system and optimization of logistics.
- Recovery of waste with economic value:
- Biogas
- Closing water cycles

10. Audits and final reports

- What is a RECP audit?
- Conducting a cleaner production audit
- Psychological aspects of auditing
- Cleaner production audit versus initial review and auditing in an environmental management system.
- Reporting.

11. From RECP to EMS and CE

- Elements of an environmental management system
- Initial environmental review
- Environmental policy, environmental objectives
- Setting environmental targets and establishing an environmental programme
- Documentation.

Annex 2.

Materials and presentations

1. European Union for Environment Regional Programme “Resource Efficient and Cleaner Production (RECP) Project. RECP Coaching Program in Armenia, Part I. Modules 1-6.
2. European Union for Environment Regional Programme “Resource Efficient and Cleaner Production (RECP) Project. RECP Coaching Program in Armenia, Part II. Modules 7-12.
3. Resource Efficiency and Cleaner Production Clubs for Small Enterprises Facilitator’s Manual https://www.dropbox.com/sh/wznkjz3ouekse6q/AADmCYMqZFivbvV4UoqdNJEa/1.%20Facilitator%20manual?dl=0&preview=20191130+RECP+Club+Facilitators+Manual_.docx&subfolder_nav_tracking=1
4. RECP Clubs for Small and Medium Enterprises Scaling Up Resource Efficient and Cleaner Production ECP Manual for Enterprises. https://www.dropbox.com/sh/wznkjz3ouekse6q/AABP5YDmdnLbUb9NAQj9nSdra/10.%20Enterprise%20manual?dl=0&preview=RECP+Club++Manual+for+Enterprises.docx&subfolder_nav_tracking=1
5. <https://drive.google.com/drive/u/1/folders/1uU9gt0GYoZiLneAAgfUW9cwTpgQ50NuQ>

(ToR of RECP Experts).