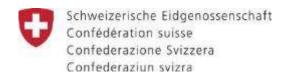
# MANAGEMENT REPORT

Resource Efficient and Cleaner Production of Ukraine



December 2016









# List of abbreviations

CPC Cleaner Production Centre

CP Cleaner Production
ChL Chemical Leasing
ChM Chemical Management
IE International Expert
EoI Expression of Interest
IPA In-plant assessments

ISO International Organization for Standardization

NE National Expert

NEFCO Nordic Environment Finance Corporation

NTUU "KPI" National Technical University of Ukraine "Kiev Polytechnic Institute"

RECP Resource Efficient and Cleaner Production

RECPC Resource Efficient and Cleaner Production Centre

SAEE&EM State Agency of Energy Efficiency and Energy Management SECO The State Secretariat for Economic Affairs (SECO) is part

of the Swiss Federal Department of Economic Affairs

SRC Swiss Reference Centre TOT Training of Trainers

UAH Code of Ukrainian currency (Hrivna) according to ISO 4217

ULIE Ukrainian League of Industrialists and Entrepreneurs

UNDP United Nations Development Programme
UNEP United Nations Environment Programme

UNIDO United Nations Industrial Development Organization

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# **Background**



The present report provides an overview of activities carried out from January 2016 until December 2016 within the framework of the UNIDO project: "Promoting the adaptation and adoption of Resource Efficient and Cleaner Production (RECP) through the establishment and operation of a Cleaner Production Centre (CPC) in Ukraine" The project has been supported by the government of Switzerland and Austria since 2013.

The primary goal of the Centre is to enhance the resource productivity, competitiveness and environmental performance of the companies in Ukraine, supporting the adaptation and adoption of Resource Efficient and Cleaner Production methods, practices, technologies and policies in the country. The core activities of the Centre are:

# **Core Activities**

Resource and Energy Efficiency Assessments of enterprises and identification of technical recommendations aiming to increase natural resource productivity taking into consideration environmental, economic and social aspects

Technical advice and expert support in the implementation of measures to reduce energy- and resource consumption

Development of recommendations on technology transfer and cooperation with national and international financial institutions for finanancing

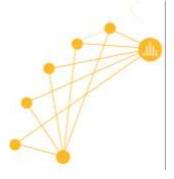
Capacity Building of national experts in the field of environment and energy efficiency

Independent technical assessment of equipment and technologies and identification of monitoring systems

Result Dissemination and awarenss raising

Policy advice and implementation of international RECP projects

# Highlights in 2016



### **RECP Service Delivery and Application**

In 2016, **32 RECP assessments** were completed in 6 regions of Ukraine (Kyiv, Vinnytsia, Zaporizhzhia, Odesa, Lviv, Kharkiv). The table below indicates a summary of the assessments:

Savings	2016 feasible options identified	Out of this: Implemented (end of 2016)	Out of this: Feasible options remaining for implementation
Options identified	144	17	Up to 127 identified options can be implemented/30 options to be implemented in 2017
Reduction in materials consumption, kg/y	397,000	400	Up to 396,600
Reduction in water consumption, m3/y	78,600	7,500	Up to 71,100
Energy savings, MWh/y	23,630	2,164	Up to 21,466
Reduction of CO2 emissions, t/y	5,300	562	Up to 4,738
Total Economic savings, EUR/y	Identified 814,000	Achieved end of 2016: 88,189	Up to 725,811 achievable

As the table indicates, the reduction in water consumption (m3/y) and CO2 emissions (t/y) and energy savings (MWh/y) is on average 10%. The achieved economic savings in 2016 amounted to EUR 88,189 which contributed to approximately 11% of the total identified economic savings. It should be noted that most of the RECP options implemented in 2016 are low-cost options that have a short pay-back period (less than 6 months). The remaining options identified are more complex and often require new technologies and high investments, thus require a longer implementation period. Given that current interest rates are high, most companies are reluctant to make large investments in the short term and are primarily implementing low cost options.

In 2017, the Centre will monitor and follow up with companies on the implementation of options identified during the assessments in 2016 and in previous years. Moreover, the Centre will strengthen technology transfer and try to foster cooperation between banks and financial institutions to facilitate higher-investments.

The Resource Efficient and Cleaner Production Centre (RECPC) provided capacity building activities through the provision of 76 workshops in 6 regions in Ukraine (Kyiv, Zaporizhzhia, Vinnytsia, Odesa, Lviv and Kharkiv) for 75 trainees (52 men/23 women), 61 trainees successfully accomplished the training course and were nominated for certification.

Training on Electric Safety, Electric Protection and Labour Safety was provided to **6 RECP experts**; **37 events** were organized and conducted for representatives from industry, research institutions and governmental organizations; the RECPC also participated in **87 national events** aiming to disseminate information on RECP and acquire customers. 11 companies signed contracts with the Centre on a commercial basis.

**2 Train the trainer seminars** for experienced national RECP experts were organized and carried out by international trainers on RECP implementation and project development. **6 Final conferences in combination with an Award Ceremony** were organized and carried out in 6 regions from November to December 2016.



Informational seminar «Enhancing Resource efficiency at companies in Vinnytsia region», October 2016



Award ceremony at the Final conference, Vinnytsia, December 2016

### RECP Policy, Cooperation with Institutions and RECP technologies

A draft study on the inclusion of RECP in national environmental policies was prepared and the paper "Resource efficient and cleaner production innovative option: liquids purification process based on electromagnetic concentration" (Anton Kleshchov et al., 2016) drafted and submitted to the Journal of Cleaner Production and the UNIDO KMS platform in September. The RECPC has been invited to participate in the Advisory Board of the Ministry of Ecology and Natural Resources of Ukraine. The cooperation with international institutions continued. The Centre supported the preparation of phase II of the regional EU funded project "Greening Economies in the Eastern Neighborhood" (EaP GREEN) as the national focal point. Moreover the Centre participated in the "Programme to Support the Green Modernization of the Ukrainian Economy", which is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Ukrainian Chamber of Commerce and Industry, the Center for Corporate and

Social Responsibility and the Institute of Green Economy.

The RECPC strengthened its cooperation with international partners and signed a Memorandum of Understanding with the Danish Business Association; the TUBITAK Marmara Research Center and the Energy Research Institute of Shandong Academy of Science.

The Resource Efficient and Cleaner Production Centre, obtained legal status as a Limited Liability Company (LLC) on September 30<sup>th</sup>, 2016 and qualified for the ISO 9000:2015 certification. Moreover the Centre renewed the RECPNet membership in November 2016.

In terms of new project development the Centre prepared and submitted 11 applications in line with the partners mandate, and has moreover developed and submitted 5 project concept notes to the department of international cooperation of the Ministry of Foreign Affairs of Austria through the Austrian Embassy of Austria in Kyiv, 5 concept notes to the Green Economy Programme of GIZ and 6 concept notes related to partnership building to the Government of Norway through the International Foundation for Social Adaptation. In order to facilitate technology transfer and knowledge sharing a study tour for 8 national RECP experts and company representatives from Ukraine was organized to Switzerland in August 2016.



Basel Incineration Plant with Heat Recovery and District Heating, August 2016

# The Resource Efficient and Cleaner Production Centre in Ukraine



On January 29<sup>th</sup> 2013, the official inauguration of the project took place at NTUU "KPI" and in June 2013, the Centre obtained legal status as a NGO with the aim to deliver RECP services to industries, municipalities and the national government.

Founders of the Centre and three main national project partners are: the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (http://www.kpi.ua/), the Science Park "Kyivska Polytechnika" (http://www.spark.kpi.ua/) and the Ukrainian League of Industrialists and Entrepreneurs (http://www.uspp.org.ua/). The Centre has a professional team of experts with academic background in different industrial sectors. It follows a sector and regional approach focusing on national priority industries, namely chemicals, agro-processing, metallurgical and metal processing. The target regions foreseen in the original project documents were Vinnytsia, Zaporizhzhia, Kyiv, Lviv, Luhansk, Kherson & the Crimea. Due to the political situation, it was decided to replace Luhansk by Kharkiv and the Crimea by Odessa. The Swiss Consortium under the lead of the University of Applied Science and Arts Northwestern Switzerland (FHNW) was selected as a Swiss Reference Centre to provide technical support to the Centre in Ukraine. In May 2015, a Swiss Chief Technical Advisor (CTA) was appointed to support the team of the Centre in technical as well as strategic terms. On September 30th 2016, the Resource Efficient and Cleaner Production Centre obtained its legal status as a Limited liability company (LLC). It was decided during the Steering Committee meeting held on February 09th, 2016 and May 12th, 2016 to establish additionally to the NGO a LLC in order to allow the generation of income. The new legal status will form the baseline for a financial independent and sustainable center. The RECPC plays an important role in coordinating all national RECP efforts and promoting partnership links between public and private institutions at national and regional levels. Thus the RECPC will focus its activities to facilitate sustainable development in Ukraine in all its dimensions and create economic, environmental and social benefits.



## **Economic** benefits

Optimization of the productive use of natural resources



#### **Environmental Benefits**

Minimization of the impact on the environment and nature, by preventing the generation of waste and emissions



#### **Social Benefits**

Minimization of risks to people and communities from enterprises and other organizations

Figure 1: Creating sustainable development in Ukraine

### **Organizational set-up**



The Centre's core team consists of 7 full time employees and 21 subcontractors. The Centre established a pool of trainees and cooperates with national experts on a sub-contract basis.<sup>1</sup>

The organizational set-up and structure of the Centre is indicated below:

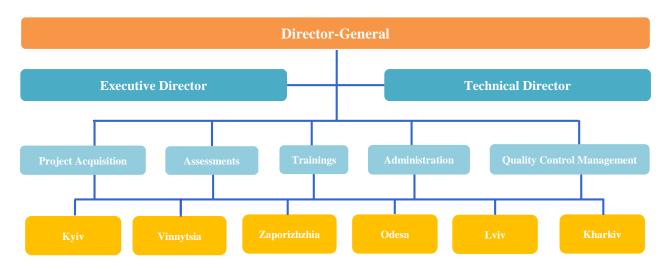


Figure 2: Organigram of the Centre

#### **Advisory Board**

The Advisory Board is a body established within the UNIDO project, which provides strategic advice and recommendations.<sup>2</sup>

The Regular Advisory Board meeting was held on January 21st 2016. The participants discussed and agreed on the importance and relevance of the RECP implementation in Ukraine, as well as on developing additional international projects, in line with the increased RECP policy demand within Government, industry, academia and public institutions.

#### **Steering Committee**

The Steering Committee has been established to ensure the efficient implementation and organization of the project.<sup>3</sup>

The regular Steering Committee meeting took place on February 9th 2016 where the following main points were presented and discussed: overview of the RECP project activities, Mid-Term evaluation results and recommendations, results of the project, selection of the best legal entity for

<sup>&</sup>lt;sup>1</sup> A list of full time employees and subcontractors is provided in Annex 2

<sup>&</sup>lt;sup>2</sup> A list of the Advisory Board Members is provided in Annex 3

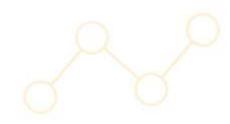
<sup>&</sup>lt;sup>3</sup> A list of the Steering Committee members is provided in Annex 4.

doing Business in Ukraine, overview of the "EaP Green" project, revised logical framework for the project period 2016-2018 as well as the business and work plan for the RECPC in 2016. During the meeting the following decisions were made:

Ad	Area	Decisions
1.	Management Report 2015	Revise the Management Report and send the revised version to the SC Members taking received comments into consideration.
2.	Mid-Term Evaluation	Request a no-cost extension until 31 December 2018 (two years)
3.	Legal Entity	The proposal was made to set-up a combination of a LLC and a NGO. Upon request of the SC members this proposal will be further elaborated and analyzed. Arrange the next SC Meeting in about 3 months in order to decide on the legal status based on the analysis
5.	Logical framework 2016-2018	Send the revised logical framework for final approval to the SC members
6.	Business Plan (2016-2018)	Revise the Business Plan taking comments of the members into consideration
7	Work Plan (2016)	Work Plan has been accepted considering an adjustment based on the comments from the Steering Committee Members
	Additional Points	Contract a reputable audit company to conduct a full annual financial audit Work on internal procedures, processes and planning ISO Certification to be obtained

Table 1: Decisions of the Steering Committee Meeting, February 2016

The additional extraordinary meeting of the Steering Committee meeting took place on May 11th 2016. The meeting provided a briefing to Steering Committee Members and selected participants on the potential options for the Centre's legal form and recommendations on the best and most suitable option. The Steering Committee decided based on these options to establish a Limited Liability Company (LLC) in line with the already existing NGO and to submit the required and signed documents to the Registration Office in Ukraine.



# **Activities and results**

### **Technical assistance at plant level**



In 2016, the Centre has conducted Resource efficient and Cleaner Production assessments in companies/organizations in the following six regions in Ukraine: 6 companies in Kyiv, 6 companies in Vinnytsia, 6 companies in Zaporizhzhia, 5 companies in Lviv, 1 public utility in Odesa, 6 companies in Dnepropetrovsk region and 2 companies in Kharkiv.<sup>4</sup>





Measurement of losses as a part of technical assessments

Compared to 2013, in which the Centre increased the number of assessments to 32 in 2016 achieving an increase of 260%. In the same period, the Centre expanded its activities from 2 to 6 regions in Ukraine.

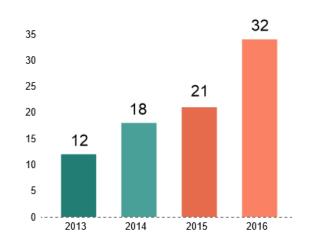


Figure 3: Number of the RECP assessments in Ukraine, 2013 to 2016

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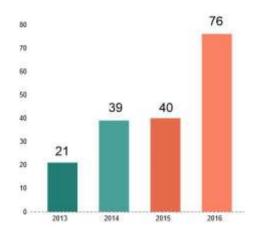
<sup>&</sup>lt;sup>4</sup> The list of companies is provided in Annex 5.

### **National Capacity Building**



In 2016, the training for new RECP experts was intensified and the training portfolio diversified. In total, 75 trainees participated in 76 RECP workshops in Kyiv, Vinnytsia, Zaporizhzhia, Lviv, Odesa and Kharkiv regions and 61 trainees successfully accomplished the training course and were nominated for certification.<sup>5</sup>

In the last four years, the total number of workshops for trainees increased from 21 events in two regions of Ukraine (2013) to 76 workshops in six regions (2016). The total number of certified trainees per year increased from 18 in 2013 to 61 in 2016.



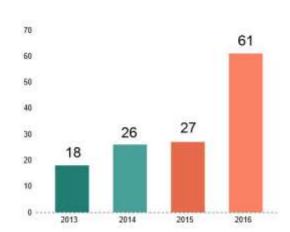


Figure 4: Number of Workshops for trainees, 2013 to 2016

Figure 5: Number of certified trainees, 2013 to 2016

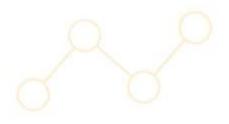
The RECP Centre's technical experts participated in national and international capacity building training courses:

- One staff member attended the Summer School "Green Industry: Pathways towards Inclusive and Sustainable Industrial Development" in Budapest organized jointly between UNIDO and the Central Europe University
- One staff member participated in the course "Sustainable Energy Solutions" and one in the Lane Kirkland Scholarship Programme in Poland
- 4 staff members participated in the course "Fans System Optimization", organized by the UNIDO UKR IEE project
- 4 RECPC experts participated in advanced vocational trainings on Energy Efficiency, organized by the "Fraunhofer Institute for Factory Operation and Automation"
- 6 RECP experts participated in the training on Electric Safety, Electric Protection and Labour Safety, organized by "Novator Ukraine" (Partner of Quality Austria).

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<sup>&</sup>lt;sup>5</sup> A list is provided in Annex 6.

- **2 Train the trainer seminars** for experienced national RECP experts and staff members were organized and carried out:
  - "Technical options on RECP for Food and Agro processing companies" in April 2016 in the Vinnitsa region.
  - "Training and support for proposal preparation" by Christoph Hugi and Emmanuel Oertlé for 20 participants conducted in Kyiv on July 11<sup>th</sup>, 2016.



### **Study Tour to Switzerland**



A Study Tour to Switzerland was organized in August 2016 during which 8 RECP experts and company representatives from Ukraine visited 8 companies in Switzerland in order to build capacity and facilitate technology transfer. The study tour resulted in technology request from the participating companies and a very good feedback from the participants. Besides capacity building and technology transfer the RECPC also built partnership with international companies.



8 experts from Ukraine visiting 8 companies

Brauerei Fischerstube AG (brewery)

Aimé Pouly (bakery)

Sustainable Business Associates (SBA) (consulting company)

Kehrichtverwertungsanlage Basel (iwb)(incineration plant)

Biopower Nordwestschweiz AG (bio power plant)

Gasverbund Mittelland AG (gas power plant)

Wander AG (food production)

Carbotech AG (environmental consulting)

### **Awareness Raising and Information Dissemination**

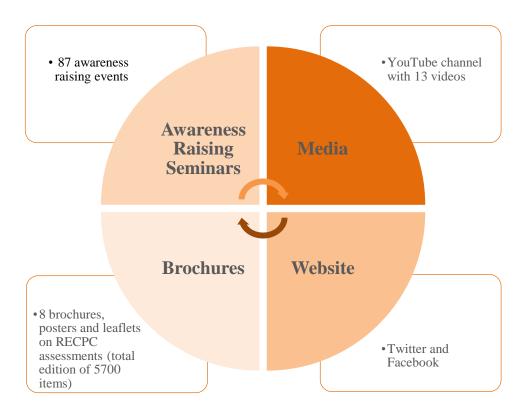
Awareness on RECP as well as on the Centre as national focal point for RECP services was promoted through the organization of various events and active participation of the Centre in national and international seminars, fairs, and roundtables.

Six Final conferences with an award ceremony were held in 6 regions of Ukraine in 2016. Representatives from national industries, government, academia and financial institutions participated in the conferences.

Four information seminars were held in the regions to disseminate the information on RECP and to search companies as well as qualified participants for the national capacity building training.

37 awareness raising events were organized by the RECPC in the respective regions in 2016.

Staff and experts from the Centre participated in 50 national and international events on energy and resource efficiency and general environmental issues in Kyiv, Vinnytsia, Zaporizhzhia, Odesa, Kharkiv and Lviv in order to disseminate information on RECP implementation in Ukraine and to establish partnerships with potential clients (87 awareness raising events in total).<sup>6</sup>



<sup>6</sup> A list of awareness raising activities is attached in Annex 7

### **Policy Advice**



The RECPC has been successfully contributing to RECP Policy and Strategy and focusing on "Mechanisms for mainstreaming RECP concepts and policy instruments created at suitable administrative levels in relevant national and regional policies and regulations" which is a part of the Logical Framework of the project "Promoting the adaptation and adoption of RECP (Resource Efficient and Cleaner Production) through the establishment and operation of a Cleaner Production Centre in Ukraine".

Core activities of the center include policy advice and information dissemination, data provision based on company assessments and data monitoring based on RECP options implementation; reporting on RECP benchmark and baseline studies and contribution to the development of national and regional environmental and sustainable development programs at a regional level and preparation of project proposals related to RECP for industries, industrial associations, municipal and state central authorities.

#### **Global situation**

Sustainable development and resource efficiency are embedded in numerous strategies and goals at a regional and global level such as the Flagship Initiative Europe 2020 Strategy and the Sustainable Development Goals (SDGs). Through its work in Ukraine, the Centre, for example, is contributing to the bellow indicated SDGs:









According to the **Flagship Initiative Europe 2020 Strategy** ("Resource efficient Europe" initiative), resource efficiency is the key to increase economic development and creating jobs in Europe. "The flagship initiative for a resource-efficient Europe provides a long-term framework of actions in many policy areas, supporting policy agendas for climate change, energy, transport, industry, raw materials, agriculture, fisheries, biodiversity and regional development. This is to increase certainty for investment and innovation and to ensure that all relevant policies factor in resource efficiency are in a balanced manner".



**Ukraine also signed the Paris Climate Agreement** in 2016. According to the Agreement, the Governments agreed:

- To maintain a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels
- To aim the limitation in increase to 1.5°C
- To peak on the need for global emissions as soon as possible, recognizing that this will take longer for developing countries
- To undertake rapid reductions thereafter in line with the best available science.

The above mentioned international initiatives, agreements and environmental agenda will put pressure on the Ukrainian Government and industry in general including SMEs and large enterprises to commit to resource efficiency and, furthermore, to implement and put concrete activities and measures in practice.

Thus, the transition to a resource efficient economy requires a smart way of defining policies and addressing multiple objectives as well as involving stakeholders at the same time. The connection between economy and resource efficiency makes it very relevant to implement a wide range of policies such as energy, transport, agriculture, construction, industrial, research and innovation policies at the both national and regional levels. These measures should combine smart regulation, market-based instruments, incentives, information exchange and support for voluntary approaches.

Despite the fact that policy work has been a major challenge for the past years, the Centre initiated a number of policy work activities and achieved the following results:



• Participation and active engagement in the Green Economy Growth Platform by carrying out a number of interviews with representatives of industrial companies on green services. It is a Platform aiming to support the Green Modernization of the Ukrainian Economy, and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the RECP Centre,

the Ukrainian Chamber of Commerce and Industry, the Center for Corporate and Social Responsibility and the Institute of Green Economy.

- Preparation of the report "Analysis of challenges for service providers to sell green services" for which 15 technical and managerial experts were interviewed. The results were presented at the Feedback Roundtable on "Barriers and hurdles for businesses and service providers to invest in new and cleaner technologies respectively to sell green services" with the Green Economy Platform on November 22nd, 2016. The roundtable was co-organized by the Centre. Representatives from the companies, state authorities, international organizations, experts and academia, NGOs and environmental organizations, financial institutions and consulting companies participated.
- On October 26th and December 7th, 2016, the Centre representative participated in the Working Group (WG) meeting on Low Carbon Policy design (under the USAID "Municipal Energy Reform Project"). The objective of the WG was to develop and demonstrate to the Ukrainian Government the list of Low Carbon Policies in all economic sectors. The WG will also continue holding regular meetings during 2017.
- On October 27th, 2016, the Director of the Centre, Mr. Ihor Shylovych participated in the
  meeting of the Public Council to the Ministry of Ecology and Natural Resources of Ukraine.
  In November 2016 Mr. Igor Shylovych has been an appointed as an official Public Council
  member to the Ministry of Ecology and Natural Resources of Ukraine.
- From 12 to18th November 2016, the Centre representative participated in the international climate negotiations at the Conference of Parties (COP 22) of the United Nations Framework Convention on Climate Change (UNFCCC) as an observer and established contacts with the Ministry of Ecology and Natural Resources of Ukraine, as well as climate fund's representatives. One expert from the Centre participated in the Working Group for the Paris Agreement Intended Nationally Determined Contributions (INDCs) evaluation and revision and will also continue in 2017. The expert has been appointed to participate in the Ukrainian Working group under the Ministry of Ecology and Natural Resources of Ukraine for the implementation of the Paris Agreement in the country.
- The goal is to support government agencies and possibly business representatives and other intermediary organizations in designing and implementing policy instruments and other initiatives which would foster a greater uptake of RECP by businesses and other organizations. The Centre prepared a draft study of the legal and regulative environment in Ukraine related to RECP implementation and a draft paper aiming to foster RECP options' implementation by the enterprises. The draft study and paper will be presented and discussed at the Expert Group Meeting planned to take place in 2017.

### **Technology Transfer and Development of Financial Mechanisms**

In order to ensure long-term financial sustainability, the Center provides technical consultations and trainings on energy efficiency in public and residential buildings. In 2016 the RECP Centre has conducted energy assessments with technical options for the following public and residential buildings in Ukraine:

- The State high school "Kyiv electromechanical college"
- The administrative building of the Desnianska district state administration in Kyiv
- The Izmailska specialized boarding-school-naval lyceum with intensive military and physical training
- The Lviv geriatric pension (Lviv elderly house)
- The company "Pharmatsia Zaporizhzhia" (storage buildings)
- 12 residential buildings at the Desnianska district in Kyiv
- "Khmilnyk" and "Pivdenniy Bug" health resorts (Pre-assessment carried out), and
- The Student Hostel of the Kharkiv Regional Institute of the Academy of State Governance of Ukraine.

Additionally a number of commercial offers were prepared and submitted for energy and technical assessments:

- The Izmail State Pedagogical University (2 Hostels and an Administrative Building)
- 19 schools in Izmail district, Odessa region, and
- 61 school buildings, administrative buildings, healthcare facilities, culture centers and kinder gardens in Dobropol'e district of Donetsk region.

Ukrainian companies face serious obstacles in higher-cost RECP options and technologies due to limited access to finance and lack of financial incentive schemes. Therefore, the Centre has been actively working on establishing partnership with financial institutions aiming to develop financial instruments to support SMEs and industrial organizations in buying and implementing green technologies. The Centre strengthened its cooperation with the following financial institutions and potential funding sources:

- Bank Lviv
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Together with the Bank Lviv, the RECPC has been actively establishing cooperation with a number of companies in Ukraine and has also developed project proposal. The RECPC has been cooperating with the Bank Lviv to establish a mechanism to conduct technical audits and jointly organize and participate in conferences and exhibitions in Western Ukraine, in particular in the following:

- 1) A set of seminars entitled "Improving energy efficiency in buildings technical audits for energy saving and financing of projects in Lviv and Western Ukraine" was organized by RECPC and the Bank of Lviv starting in October-2016 and will continue until March 2017. The seminars focused on awareness raising in energy efficient technologies, methodologies and approaches as well as financial mechanisms for Engineers and Managers of Homeowners' Associations.
- 2) A joint project on technical assessments of Danish companies in Ukraine was prepared in cooperation between RECPC, Bank Lviv and the Danish Investment Fund (IFU). The project foresees technical assessments and Cleaner production audits in Danish companies located in Ukraine.
- 3) The joint project "Green Credit Trust Fund" is under discussion with potential donors. The objective of the fund is to provide partial investments to SMEs and condominiums to help covering the expenses for energy savings in households and implementation of energy efficiency and resource efficiency options in SMEs. The natural resource, including energy efficiency savings will be calculated based on audit results conducted by the RECP experts.

The Centre continued intensifying the cooperation with the "Programme to Support the Green Modernization of Ukrainian Economy" implemented by GIZ based on the Memorandum of Understanding (MoU) signed in April 2015. The Parties defined the following major cooperation areas: a) sectoral advice; b) consultancy; c) training and educational events, with joint organization and participation and; d) joint organization and participation in workshops and seminars. In addition, the Centre established cooperation with McKinsey, Deloitte, Baker Tilly and the Danish Investment Fund (IFU) in 2016.

### Partnership development



Establishing and strengthening partnerships with new and existing partners was an important activity of the RECPC in 2016. The table provides an overview of the cooperation with new partners.

### Partner Cooperation in 2016

Danish Business Association (04.11.16)	Memorandum of Understanding between the Parties on resource efficiency, energy efficiency, cleaner production and renewable energy, technical assessments, cleaner technology transfer and promotion
Zaporizhzhia Chamber of Commerce and Industry (November 2016)	Cooperation Agreement on RECP implementation in Zaporozhye region, joint organization of conferences and workshops in Zaporizhzhia
Ambiente Italia and AC Consult LLC (11.07.16)	Memorandum of Understanding on joint project proposal on resource efficiency, energy efficiency, cleaner production and renewable energy, technical assessments, cleaner technology transfer
Lviv Public Association "Association of Builders "Construction Industry" (01.06.2016)	Cooperation Agreement on RECP implementation, support in organization of conferences and information seminars in Lviv
Devotra B.V. (22.12.2016)	Memorandum of Understanding on science education, sustainable development, resource efficiency, energy efficiency, cleaner production and renewable energy, climate change, technical assessments, cleaner technology transfer
Energy Research Institute of the Shandong Academy of Science (ERI of SDAS), 03.12.2016	Memorandum of Understanding to develop and implement efficient models to strengthen the capacity of enterprises, institutions and citizens in Ukraine and China within the area of resource efficiency and energy efficiency by jointly implementing projects and programs

The Scientific and Technological Research Council of Turkey (MAM TÜBİTAK), 28.11.2016	Memorandum of Understanding on resource efficiency, energy efficiency, cleaner production and renewable energy, technical assessments, cleaner technology transfer and promotion, and common activities like awareness raising on the issues above; information and promotion activities, organizing joint training activities
Energieagentur Obersteiermark GmbH (12.03.2016)	Memorandum of Understanding on modernization of material flow, energy use and improvement of resource efficiency; networking support and effective cooperation on project development related to emissions reduction, green economy development and low carbon footprint

Figure 4: Overview of partnerships

# **Gender mainstreaming**



Gender mainstreaming is a strategy to promote gender equality to integrate a gender-sensitive perspective into the organization itself and into the entire development project cycle. The RECPC promotes resource efficient and cleaner production methods in particular through plant assessments, training of experts, knowledge generation and dissemination and also contributes to policy change and technology

transfer. The RECPC is thus in an excellent position to address gender aspects, for instance, by making gender sessions an integral part of any capacity-building activity provided by the Centre. Ensuring that women and men have equal access to and participate in trainings is an important step in creating employment opportunities for women. The RECPC can also consciously target and deliver technical training to industries in which women predominate, such as small and medium enterprises, industries that focus on reducing, reusing and recycling, as well as waste collection, treatment and disposal enterprises. Furthermore, the RECPC makes gender competence a necessary requirement in recruitment processes and undertakes special measures towards greater gender parity among staff, such as outreach and establishment of databases of qualified women candidates. Already in 2015 the RECPC has appointed a gender focal point. The Centre participated in a number of gender workshops with other partners such as SIDA and USAID including:

Date	Title/Topic	Place	Organizer
October 5 <sup>th</sup> 2016	Training course "Gender Competence:	Kyiv	GIAC
	SKILL STAFF-XXI"		"Krona"
April 27 <sup>th</sup> 2016	Discussion "Minimization of sexism and negative gender stereotypes in media" in the National Democratic Institute (NDI)	Kyiv	NDI
February 24 <sup>th</sup> 2016	Workshop "Gender Workshop"	Kyiv	SCO

The Centre also organized interviews for the publication "Woman in industry":

Date	Title/Topic	Place	
October 25 <sup>th</sup> , 2016	Interview for "Woman in industry"	Odesa	
	publication		
October 20 <sup>th</sup> , 2016	Interview for "Woman in industry"	Vinnytsia	
	publication		
October 11 <sup>th</sup> , 2016	Interview for "Woman in industry"	Kharkiv	
	publication (2 participants)		
June 15 <sup>th</sup> , 2016	Interview for "Woman in industry"	Dnipro	
	publication (4 participants)		

In 2016 UNIDO highlighted the Centre's contribution to gender mainstreaming in a publication of the Environment Department which was prepared for the UNIDO 50<sup>th</sup> anniversary.

# Highlighting the RECPC's work on Gender Mainstreaming for UNIDO's 50 Years anniversary

# Resource Efficiency and Women's Empowerment: Industrial Development in Ukraine

The RECPC, contributed to women's empowerment and inclusion into the industrial sector in multiple ways. Apart from training both men and women working in this largely male-dominated sector, a large-scale gender assessment was conducted in Ukraine, in order to identify what issues women in the country encounter and how the RECPC could help.

Consequently, the RECPC developed a specific strategy on gender mainstreaming within resource efficient and cleaner production approaches, mainly to support the employment opportunities for women in these sectors.

For instance, companies in which female employees predominate, such as small and medium enterprises, were specifically targeted in the selection of which companies would receive trainings. This enhanced the job prospects for women, as well as the competitiveness of these womendominated enterprises. Together with the International Finance Corporation, a conference titled "Women in Industry and Finance: Agenda for Ukraine" was organized in May 2015, to facilitate connections between women at different levels of the industrial sector. It also addressed issues related to women's empowerment and gender equality in green industrial development. The challenges and successes of the Ukrainian RECPC with regard to enhancing gender equality were spread to other Centres working on resource efficiency and cleaner production. In reward for their pioneering work on gender mainstreaming in resource efficiency and cleaner production, the Ukrainian RECPC was awarded the 2015 Gender Award by the Swiss Cooperation Office (SECO) in Ukraine.

#### Explore more at <a href="https://open.unido.org/index.html">https://open.unido.org/index.html</a> with project ID: 104112



"Due to the project, more young women gain impulse to follow their dream and build their career in fields that commonly seen as not for women." - Nadija Totska, director CJSC «SVIT-Servis»

# **Building synergies with other projects**

**EU funded project: The "Greening Economies in the Eastern Neighbourhood" (EaP GREEN)"** 



This regional project has been jointly implemented by OECD, UNEP and UNIDO since 2014 in the following six countries: Azerbaijan, Armenia, Belarus, Georgia, Moldova and Ukraine. The second phase of the project in Ukraine has started in January 2016. In 2016 22 events including conferences, forums, club modules, advanced training, review seminars and award ceremonies were hold in Kharkiv and Chernihiv (Ukraine).

In total 371 participants were registered and participated in the events. The conferences resulted in fruitful dialogues between industrial sector representatives and the RECP experts. More specifically, the following conferences were held:

- The conference "Resource Efficient and Cleaner Production (RECP) in industrial enterprises in the Chernihiv region" with the support of Chernihiv Regional State Administration held on July 15<sup>th</sup>, 2016 and;
- The conference "Resource Efficient and Cleaner Production (RECP) in industrial enterprises in the Kharkiv region" held on July 21, 2016.

Both conferences also included a Certificate ceremony for the enterprise participants of the Resource Efficient and Cleaner Production Club in 2016.



The workshop on EaP Green Project implementation

To raise the awareness on RECP in Ukraine 2 stakeholder forums on selected RECP topics (reduction and control of air emissions and efficient use of materials) were organized. Their results were presented via online summaries, articles in newspapers, journals and video materials on web resources. 12 training seminars were delivered in two regions (Chernihiv and Kharkiv). 9 companies in the Chernihiv region and 8 companies in the Kharkiv region participated in formed

RECP Clubs. The RECP Club Facilitator carried out visits to all participating companies to help conducting self-assessments. On December 14<sup>th</sup>, the final conference of the EaP GREEN Project "Implementation of the Resource Efficient and Cleaner Production in Ukraine" was held in Kyiv together with the Award Ceremony.

# Project: "Programme to support the green modernization of the Ukrainian Economy" (GIZ project)

In the framework of the "Programme to Support the Green Modernization of the Ukrainian Economy" implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in Dnipro region since November 13<sup>th</sup> 2015, the RECPC is searching and selecting enterprises to get them involved in the Programme participation, is conducting workshops on RECP for trainees and supporting the GIZ office in Ukraine on technical equipment selection.

Technical audits were conducted by RECP experts at the following companies: meat processing Factory "Premier"; Dnipropetrovsk furniture factory, OJSC; Avto transport company, LLC; Spetstekhosnastka, LLC; TM. WELDTECH, LLC.

The RECPC also provided training on RECP implementation and practical trainings combined with in-plant assessments in the enterprises involved in the Programme.

The training of experts focused on conducting in-plant assessments, analysis of enterprise's production capacity, preparation of energy heat and material flow balances and identification and specification of technical option aiming to reduce energy, water and raw materials. In total, 9 workshops were carried out and 12 experts in Dnipro region trained. The Final conference on the "Programme to Support the Green Modernization of the Ukrainian Economy in Dnipro" was organized by the RECPC and carried out on June 15th, 2016. The results of RECP assessments at the companies were presented to public and business representatives. The Guidelines on RECP implementation at company level with case studies from Dnipro region were prepared and published.

The Centre also provided its capacity to identify the best suitable measuring equipment for the "Programme to Support the Green Modernization of the Ukrainian Economy". The Centre's technician prepared technical recommendations for the measuring equipment, provided technical inputs for the tender and technical support during the tender process.

# "Ukraine-Norway" Project: "Retraining and social adaptation of military personnel and their family members in Ukraine"

Collaboration and partnership with the Norwegian University of Nordland within the Ukraine-Norway Project has been established and goes back to 2015. The main project goal is the retraining of retired army officials on civil skills demanded by the current labor market in Ukraine and helping participants with legal and social advice and support to adjust to the civil society and job requirements. The implementing agencies of the project are the Norwegian University of Nordland, International Charitable Foundation "International Social Adaptation Fund" and the RECP Centre in Ukraine, which organizes and carries out professional retraining of the project participants in the areas of energy and resource efficiency for enterprises and residential buildings. In 2016, two sets of training courses were organized with 500 academic hours each. During the period from February to June 2016, 30 trainees were trained on energy and resource efficiency and were awarded Certificates of completion at the Final conference in June 2016.

The second phase of the project started in September 2016. The representatives of the main vendors in energy and resource efficiency were invited to participate in the project as lecturers. These involved: Herz Ukraine, Schneider Electric Ukraine, Philips Ukraine, Wilo Ukraine, and Teplolux. The Final conference was held on December 9th, 2016 and 30 participants received the Certificates.

Upon successful completion of the curriculum course, the graduates receive three documents: a Certificate of professional retraining provided by the RECPC, a Certificate of the University of Nordland and a joint Diploma of the Ministry of Foreign Affairs and the Ministry of Defense of Norway.

12 from the participating participants were selected for further training on RECP under the UNIDO project as trainees.

The cooperation with the "Ukraine-Norway" Project was very successful and will continue in 2017. Both parties are interested in prolonging the cooperation and promoting the project results.

### **EU "NoGAP" Project – The Knowledge Transfer Community**

The NoGAP Project – The Knowledge Transfer Community aims at promoting the cooperation of the EU and its Members States/Associated Countries with the Eastern Partnership Countries namely: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine on bridging the gap between research and innovation. NoGAP contributes to taking advantage of the innovation potential of SMEs based on a better cooperation with researchers, transferring and using knowledge resulting from research.

The overall objective of the project is to reinforce cooperation with Eastern Partnership countries to develop a "Common Knowledge and Innovation Space". The RECP Centre started to participate in the NoGAP project in 2015 and carried out most its activities in 2016. The Centre conducted a review of enterprises engaged in the UNIDO project on required innovation technologies. In June 2016, the Final report of the NoGAP project was prepared and submitted to the Project Manager by

the RECPC expert which was followed by the closure of the project.

### **New projects applications**

In 2016 a number of project ideas and concept notes were developed:

- 11 project proposals were prepared<sup>7</sup>
- 5 project concept notes were prepared from June to July 2016 for the Austrian Embassy which are under consideration
- 5 project ideas were developed and send to GIZ
- 6 project ideas were developed and submitted to Norwegian partner (Nord University)

<sup>7</sup> A list of the project proposals is attached in Annex 8

# **Lessons learned & recommendations**

Based on experiences gained in 2016 and the results achieved, the following lessons learned and recommendations can be concluded:

Lessons learned / Challenges	Actions
Time of RECP assessments needs to be shortened.	Pre-assessment time should be 2 weeks, assessment time 3 weeks and final report preparation 2 weeks
Support companies to get information about new technologies and innovations at the stage of generating RECP options.	RECPC will use a database of technology and energy efficient equipment suppliers. RECPC's expert will also cooperate with national and international vendors at the stage of technology identification and use the contacts established during the Study Tour to Switzerland.
If the RECP option requires high investments and have a long pay-back period, Ukrainian enterprises often neglect the aspect of environment and go for cheaper options. This is also linked to the environmental regulations in the country.	RECPC is working on policy and strategy focusing on legislation gaps' analysis, RECP strategy development and National Action Plan for RECP implementation in the country. In 2017 a RECP Policy Expert Group Meeting will be organized to discuss the concrete activities and measures related to the promotion of the Resource Efficiency and Circular Economy in Ukraine and its national policies
Lack of financial mechanisms aiming to support RECP implementation for SMEs. High interest rates (approx. 20-25% in UAH) are a barrier for the clients.	RECPC will intensify cooperation with international investment funds and search for international grants to develop effective financial mechanism to support RECP implementation at company level. In 2017, the Centre will organize a number of seminars with financial institutions to promote RECP cases and RECP options which require funding.
Central and provincial government officials need to have a better understanding of sustainable development, RECP, Green industry and its relation and impact on the economic situation.	The Centre will provide trainings and workshops on these topics for Governmental officials in order to raise awareness on RECP.

# Sustainability of the RECP Centre



In 2016, an important step forward was made with the official formation and registration of the Limited Liability Company (LLC). The LLC will complement the NGO allowing the Centre to offer and conduct technical consulting and engineering work in companies and implement RECP projects for international organisations (GIZ, UNEP, OECD, GEF) on a market price. This will help to shorten reaction time of the RECPC; it will support and strengthen a market orientation and will form the baseline for the future financial sustainability. It is the

prerequisite to attract new and additional international projects in the area of RECP. In 2016, the Centre was already executing several activities in three different projects, and thus creating income.

The generated income can be used and invested for functions and activities of the Centre, based on the concrete needs and the decisions of the management. In order to increase the financial sustainability the Centre will continue focusing and strengthening on the strategic and financial planning, income diversification and generation.

With the lessons learned and the recommendations, the RECPC will continue to strengthen the financial as also the RECP's concept sustainability in the country:

- By reducing the RECP assessment time the Centre can reduce the time of staff and thus reduce cost.
- By supporting companies to obtain information about new technologies and innovations at the stage of RECP options generating, the Centre can establish links between national and international partners and build new partnerships and generate income.
- By cooperating with financial institutions the Centre can facilitate the development of effective financial mechanism.
- By providing awareness raising activities and arranging expert group meetings for different stakeholders, the Centre will also contribute to foster the sustainability of the RECP concept and thus also the demand for RECP services in the country.
- Increased efforts to be involved or as a leading institution in the implementation or execution of international projects (GEF, GIZ, EU, etc.).

## **Outlook**



Ukraine is the second largest country in Europe and has a population of 43 million, the majority of whom live in urban areas. Ukraine is a lower middle-income country with a GDP of \$131.8 billion (2014). **Agriculture contributes 12.1% of GDP, industry 29%, and services 58.8%**. Ukraine's key agricultural products include grains, sugar beets, sunflower seeds, vegetables, beef, and milk. Key industries in Ukraine are coal, electric power, ferrous and nonferrous metals, machinery and transport

equipment, chemicals, and food processing. Ukraine faces a number of environmental and sustainability challenges. The Yale Center for Environmental Law & Policy and the Center for International Earth Science Information Network at Columbia University developed the Environmental Performance Index (EPI). This index ranks how well countries perform on highpriority environmental issues, and in 2014 Ukraine was ranked on 95th among 178 countries, that is improvement of overall score by 5.44% over the past decade. The strongest achievements were made in air quality issues (by 21.33% in ten years change) and conducting policy in this area (Yale Center for Environmental Law and Policy 2015). Ukraine's National Environmental Strategy - 2020 identifies the following key environmental challenges: air pollution; quality of water resources and land degradation; solid waste management; biodiversity loss and human health problems. Additionally, during the last decades, a number and frequency of extreme climatic events have increased and affected the key economic sectors, infrastructure, settlements, water resources, and natural ecosystems (State Statistics Service of Ukraine 2014). 8During the last four years, a resource efficiency potential of more than 6 Mio Euro was identified only by the RECPC for 83 companies in Ukraine. There is a huge potential for RECP implementation in Ukraine. To improve their competitiveness through the reduction of production costs, companies need to implement and increase resource efficiency and RECP experts are therefore in a higher demand in the next years. The RECP center needs to intensify and diversify its services to companies, so it can better contribute and support the Ukrainian industry in the transition to become cleaner and more efficient. Due to the EU-Ukraine Free Trade Agreement (DCFTA) which entered into provisional force on January 1st, 2016, a large number of companies are faced with requirements and standards of the European market. Therefore, many enterprises need to modernize its production processes, improve the quality of the products and to reduce their production costs through higher resource efficiency, mainly energy efficiency. The marketing activity of the RECPC will be strengthened aiming to upscale RECP services for all industries and other regions. The Centre will focus on RECP Policy and RECP specific trainings at company level for company staff (for example, in-company training on resource efficiency, energy efficiency and green technologies), as well as on sharing information through further development of case studies to demonstrate the benefits for companies. The main focus will be therefore on marketing activities, broadening the RECP assessments through technology transfer of new, modern production technologies and quality aspects. The Centre will furthermore intensify the additional acquisition of international projects to create synergies and upscale the RECP implementation in Ukraine and to increase the financial sustainability of the Centre and focus on partners such as GIZ, Norway and GEF.

<sup>8</sup> World Bank (2016)

# **Annexes**

### Annex 1: REVIZED LOGICAL FRAMEWORK FOR 2016-2018

	Output Category 1: RECP servi Logframe 2016-2018	Achieved in 2016	2017 (planned)	<b>2018</b> (planned)
1.1. CPC established and operating as per agreed institutional and governance provisions	<ul> <li>Regular meetings of the Project Steering Committee and Advisory Board</li> <li>Adequate staffing and facilities for the CPC, female staff ratio is between 40 to 50 %</li> <li>Establishment of 6 regional offices</li> <li>Business plan revised</li> <li>Minimum of 10 staff members (including regional coordinators) trained on the CPC management and business planning, between 40 to 50% females</li> <li>Annual reports drawn up and monitored</li> <li>Annual work plans and reviews drawn up and monitored</li> <li>ISO 9000 Quality management system in place</li> <li>Financial monitoring in place, (Account audited every year)</li> </ul>	<ul> <li>2 meetings of the Project         Steering Committee and 1         meeting of the Advisory         Board</li> <li>Adequate staffing and         facilities for the CPC</li> <li>Establishment of 6         regional offices</li> <li>Business plan revised</li> <li>Minimum of 10 staff         members (including         regional coordinators)         trained on the CPC         management and business         planning, between 40 to         50% females</li> <li>Annual reports drawn up         and monitored</li> <li>Annual work plans and         reviews drawn up and         monitored</li> <li>ISO 9000 Quality         management system in         place</li> <li>Financial monitoring in         place, (Account audited         every year)</li> <li>Registration of the CPC as</li> </ul>	<ul> <li>1 meeting of the Project Steering Committee and 1 meeting of the Advisory Board</li> <li>Adequate staffing and facilities for the CPC</li> <li>Minimum of 10 staff members (including regional coordinators) trained on the CPC management and business planning, between 40 to 50% females</li> <li>Annual reports drawn up and monitored</li> <li>Annual work plans and reviews drawn up and monitored</li> <li>Financial monitoring in place, (Account audited every year)</li> <li>In year 2017, achievement of the self-financing degree of min. 20 % of the current contract amount</li> </ul>	<ul> <li>1 meeting of the Project Steering Committee and 1 meeting of the Advisory Board</li> <li>Adequate staffing and facilities for the CPC</li> <li>Annual reports drawn to and monitored</li> <li>Annual work plans and reviews drawn up and monitored</li> <li>Financial monitoring in place, (Account audited every year)</li> <li>In year 2018, the self-financing degree (national costs) will be 45 to 50 %</li> </ul>

- Registration of the CPC as independent legal entity
- In year 2018, the selffinancing degree (national costs) will be 45 to 50 %
- independent legal entity
   In year 2016, the self-financing degree (national costs) was about 20 %

# 1.2 CPC staff and associated experts trained in basic and advanced RECP methods and applications

### Logframe 2016-2018 Achieved in 2016

- 6 training courses for CPC professional staff and associated experts (incl. regional coordinators)
- Minimum 15 trainees with a diploma trained in RECP methodology in both regions Lviv and Kharkiv, (40 to 50 % of the trainees should be female)
- 20 trainees trained on RECP methodology in the other 4 regions per year (5 experts per region and year, including re-training of experts) (40 to 50 % of the trainees should be female)
- Minimum 3 RECP expert per region trained on specific CP- related topics per year
- Up-date of RECP training materials
- Databases on RECP and ChL experts up dated
- Professional Trainers in RECP or sector specific industry sectors trained (2 per region and year)

### 2 training courses (2 ToT) for CPC professional staff

- and associated experts (incl. regional coordinators)
- 7 trainees in Lviv and 9 trainees in Kharkiv with a diploma trained in RECP methodology (16 trainees in total in both regions)
- 45 trainees trained on RECP methodology in the other 4 regions per year
- 12 staff members and RECP experts trained on specific CP- related topics per year)
- Up-date of RECP training materials (Updated version of RECP Methodology Tool kit published; Energy Efficient Technologies in municipal sector prepared and published)
- Databases on RECP and ChL experts up dated (new experts added)

#### 2017

- 2 training courses for CPC professional staff and associated experts (incl. regional coordinators)
- 5 trainees in Lviv and 5 trainees in Kharkiv with a diploma trained in RECP methodology
- Min 20 trainees trained on RECP methodology in the other 4 regions (Z,O,K,V) per year (5 experts per region and year, including re-training of experts) (40 to 50 % of the trainees should be female)
- Minimum 3 RECP expert per region trained on specific CP- related topics per year (6 RECP experts in total in 2017)
- Up-date of RECP training materials (ongoing in 2017)
- Databases on RECP and ChL experts updated (ongoing in 2017)
- Sector specific industry sector expert to be trained

#### 2018

- 2 training courses for CPC professional staff and associated experts (incl. regional coordinators)
- 5 trainees in Lviv and 5 trainees in Kharkiv with a diploma trained in RECP methodology
- Min 20 trainees (Z,O,K,V) trained on RECP methodology in the other 4 regions per year (5 experts per region and year, including re-training of experts) (40 to 50 % of the trainees should be female)
- Minimum 3 RECP expert per region trained on specific CP- related topics per year (6 RECP experts in total in 2018)
- Up-date of RECP training materials ongoing in 2018
- Databases on RECP and ChL experts updated

		<ul> <li>Professional Trainers in RECP or sector specific industry sectors trained (12 experts in total trained in 2016 during Trainings of trainers)</li> </ul>	in 2017 (2 per region)	<ul> <li>(ongoing in 2018)</li> <li>Sector specific industry sector expert to be trained in 2018 (2 per region)</li> </ul>
	Logframe 2016-2018	Achieved in 2016	2017	2018
	Output Category 2: RECP servi		2017	2010
2.1. Awareness and understanding of RECP opportunities and benefits improved at national and regional levels among companies, authorities and other stakeholders	<ul> <li>Website and helpdesk maintained</li> <li>Minimum of 10 awareness seminars per year on RECP organized and attended by key stakeholders and representatives from target groups (1-2 per region)</li> <li>Minimum of 6 promotional and information materials and case studies/articles on RECP developed per year</li> <li>RECP branding developed</li> <li>Minimum of 6 Universities have integrated RECP/ChL in their curricula (1 per region)</li> <li>1 Training course for University teachers in RECP and Didactics conducted</li> <li>Minimum of 2 information seminars per year carried out with financial institutions and other</li> </ul>	<ul> <li>Website         (www.recpc.kpi.ua),         YouTube channel "RECP         Centre Ukraine", Facebook         maintained</li> <li>50 awareness raising         events per year on RECP         organized by the Centre         and 37 events attended by         RECPC representatives</li> <li>7 promotional and         information materials and         case studies/articles on         RECP developed</li> <li>RECP branding updated         (new design)</li> <li>4 information seminars         with financial institutions         and industrial associations         were organized and carried         out seminars in Odesa,         Kharkiv, Vinnytsia, Lviv</li> <li>6 video – spots developed</li> <li>6 Annual RECP Award         Ceremonies organized</li> <li>6 Exhibitions and 8 Forums         attended (14 big events in</li> </ul>	<ul> <li>Website and helpdesk maintained</li> <li>Minimum of 10 awareness seminars per year on RECP organized and attended by key stakeholders and representatives from target groups (1-2 per region)</li> <li>Minimum of 6 promotional and information materials and case studies/articles on RECP developed per year</li> <li>Organize and carry out one seminar/workshop for university teachers and other respective stakeholders with the aim to discuss the integration of RECP/ChL in the curricula of minimum 6 Universities</li> <li>1 Training course for University teachers in RECP and Didactics conducted</li> </ul>	<ul> <li>Website and helpdesk maintained</li> <li>Minimum of 10 awareness seminars per year on RECP organized and attended by key stakeholders and representatives from target groups (1-2 per region)</li> <li>Minimum of 6 promotional and information materials and case studies/articles on RECP developed per year</li> <li>Minimum of 2 information seminars per year carried out with financial institutions and other industrial associations</li> <li>Minimum of 5 RECP/ChL related videos for TV-</li> </ul>

- industrial associations
- Minimum of 5 RECP/ChL related videos for TVprogrammes developed
- 6 Annual RECP Award Ceremonies organized per year
- Minimum of 3 events as trade fairs/roundtables/ big national or regional conferences related to RECP/ChL attended per year
- Target specific training portfolio developed and minimum 5 trainings carried out per year

## total)

- Target specific training portfolio developed and 6 trainings carried out per year (Chernivtsi, Dnipro, Kriviy Rig, Dnipro, Kiev, Zaporozhye)
- Minimum of 2 information seminars per year carried out with financial institutions and other
- Minimum of 5 RECP/ChL related videos for TVprogrammes developed

industrial associations

- 6 Annual RECP Award Ceremonies organized per year
- Minimum of 3 events as trade fairs/roundtables/ big national or regional conferences related to RECP/ChL attended per year
- 5 trainings carried out per year

- programmes developed
- 6 Annual RECP Award Ceremonies organized per year
- Minimum of 3 events as trade fairs/roundtables/ big national or regional conferences related to RECP/ChL attended per year
- 5 trainings carried out per year

# 2.2. Demonstrated potential of RECP for the reduction of waste, greenhouse gases (GHG) and other emissions (water, raw material, etc.) as well as Chemical Leasing for the sound management of chemicals and energy efficiency

## Logframe 2016-2018

- Minimum of 30 RECP assessments per year in Ukraine (around 5 per region and year)
- Minimum of 3 ChL demonstration projects developed
- Minimum of 70 % of participating companies implemented more than 50% of options developed
- 3 sector specific RECP manuals published
- 1 ChL manual published
- Database on target sectors and sector-specific RECP

## Achieved in 2016

- 32 assessments have been carried out
- Official requests for participation in ChL demo-projects submitted for Henkel Ukraine, Akzo Nobel Holding Ukraine Ltd. and Ecolab Ltd. (Ukrainian branch)
- 65% of participating companies from 2016 monitored
- Database on target sectors and sector-specific RECP case studies updated

#### 2017

- Minimum of 30 RECP assessments per year in Ukraine (around 5 per region and year)
- Minimum of 2 ChL demonstration projects developed together with international ChL experts
- Provide monitoring and verification of benefits achieved by the 30 demonstration companies (Minimum of 70 % of participating companies implemented more than 50% of options developed)
- 1 sector specific RECP

## 2018

- Minimum of 30 RECP assessments per year in Ukraine (around 5 per region and year)
- Minimum 1 ChL demonstration projects developed together with international ChL experts
- Minimum of 70 % of participating companies implemented more than 50% of options developed
- 2 sector specific RECP manuals published in

	and Chemical Leasing case studies developed		<ul> <li>manual published in 2017 (Dairy Production)</li> <li>Update and publish 1 ChL manual</li> <li>Database on target sectors and sector-specific RECP and Chemical Leasing case studies developed</li> </ul>	<ul> <li>Database on target sectors and sector-specific RECP and Chemical Leasing case studies developed</li> </ul>
2.3. Mechanisms established for the sector-based replication and up-scaling of RECP results and opportunities in business	<ul> <li>Sector-based self- assessment tools, benchmarks and guidelines for 3 sectors developed</li> <li>Group-based training and assistance model for the up- scaling of RECP created</li> </ul>	<ul> <li>Group-based training and assistance model for the up-scaling of RECP created (support and assistance for EaP Green Programme on a gratuitous basis)</li> </ul>	<ul> <li>Additional sector-based guideline (1 guideline) for tunnel kiln assessment developed in 2017</li> <li>Organize and carry out group-based training and assistance model for the up-scaling of RECP created (Support of RECP Clubs and RECP Forums)</li> </ul>	<ul> <li>Sector-based self- assessment tools, benchmarks and guidelines for 2 sectors developed</li> </ul>
	<b>Logframe 2016-2018</b>	Achieved in 2016	2017	2018
2.4. Results and benefits of RECP and ChL demonstrations documented in verifiable and transparent manner	<ul> <li>National specific indicator framework for measuring RECP benefits at company level established and based on general RECP programme indicators</li> <li>Global sustainability criteria for ChL business models applied</li> <li>Monitoring and Verification of benefits achieved by 30 demonstration companies per year</li> </ul>	<ul> <li>Monitoring and Verification of benefits achieved by 21 demonstration companies in 2016</li> </ul>	<ul> <li>Guideline on specific indicator framework for measuring RECP benefits to be prepared in 2017 in Ukrainian (based on UNIDO indicators publication)</li> <li>Monitoring and Verification of benefits achieved by 30 demonstration companies per year</li> </ul>	<ul> <li>National specific indicator framework for measuring RECP benefits at company level established and based on general RECP programme indicators</li> <li>Global sustainability criteria for ChL business models applied</li> <li>Monitoring and Verification of benefits achieved by 30 demonstration companies per year</li> </ul>

	<b>Output Category 3: RECP policy</b>	y and strategy			
sorategy developed	<ul> <li>National working groups established and operational</li> <li>Gaps identified for RECP promotion and policy</li> <li>1 Policy strategy with RECP targets and policy instruments published</li> <li>1 report, to be elaborated with other national partners, with policy recommendations to the government elaborated within the framework of the Platform for Green</li> </ul>	<ul> <li>Director of the Centre has been an appointed as an official Public Council member to the Ministry of Ecology and Natural Resources of Ukraine.</li> <li>Draft analysis report of the legislation related to RECP prepared by Maryna Lytvynchuk (assistant of the Parliament' Member).</li> <li>Preparation of the report "Analysis of challenges for</li> </ul>	Activities of the working groups are ongoing Gaps identified for RECP promotion and policy ( presentation/promotion and wide discussion within Policy Expert Group Meeting) 1 Draft Policy strategy with RECP targets and policy instruments prepared	•	Activities of the working groups are ongoing 1 Policy strategy with RECP targets and policy instruments published (update of the draft Policy strategy with RECP targets and policy instruments)
	Economy Growth	service providers to sell green services" within the Green Economy Growth Platform			
3.2. National action plan for RECP developed and implementation mechanisms established	<ul> <li>Implementation mechanisms for RECP policy and strategy developed</li> <li>1 National action plan published</li> </ul>		Implementation mechanisms for RECP policy and strategy developed 1 Draft National action plan published		-
I	Logframe 2016-2018	Achieved in 2016	2017		2018
3.3. Implementation and enforcement capacity of the government for RECP-related policy and legislation enhanced	<ul> <li>RECP policy training for regional government officials conducted (one training per year)</li> <li>Database of national RECP experts and expertise established and open to central government and regional authorities</li> </ul>	<ul> <li>RECP policy trainings for regional government officials conducted (one training per year) in Kharkiv region, Chernigiv region, Dnipropetrovsk region</li> </ul>	Organize an Expert Group Meeting with government officials in Ukraine and international experts to facilitate a policy dialogue on industry and policy instruments Database of national RECP experts and expertise		

3.4. Technical guidelines for target sectors developed	<ul> <li>Gaps identified in the system of technical guidelines</li> <li>3 Selected guidelines (BAT/BEP) developed and endorsed for target sectors (food processing etc.)</li> </ul>		established and open to central government and regional authorities  Gaps identified in the system of technical guidelines  Selected guidelines (BAT/BEP) developed and endorsed for target sectors with support of FHNW	Selected guideline (BAT/BEP) developed and endorsed for target sectors (food processing etc.)
3.5. RECP opportunities utilized for the national implementation of Multilateral Environmental Agreements (MEAs): Persisting Organic Pollutants (POPs), Ozone Depleting Substances (ODS), GHG, hazardous waste, Clean Development Mechanisms (CDM)	<ul> <li>Assessment of commitments and actions under RECP-relevant MEA undertaken</li> <li>2 Opportunities for MEA implementation identified         <ul> <li>1 Active participation in an international MEA project</li> </ul> </li> </ul>	1 Opportunity for MEA implementation identified in 2016 (Marrakesh Agreement)	<ul> <li>Assessment of commitments and actions under RECP-relevant MEA undertaken</li> <li>1 Opportunity for MEA implementation identified</li> <li>1 Active participation in an international MEA project</li> </ul>	1 Opportunity for MEA implementation identified
(0-1-5)	Logframe 2016-2018	Achieved in 2016	2017	2018
	<b>Output Category 4: RECP techn</b>	ologies and financial mechanisms	3	
4.1. Professional capacities created and utilized to support the adaptation, development and transfer of RECP technologies	<ul> <li>90 additional RECP national experts on RECP technologies trained</li> </ul>	■ 61 additional RECP national experts trained	<ul> <li>30 additional RECP national experts trained</li> </ul>	<ul> <li>30 additional RECP national experts trained</li> </ul>
4.2. Awareness and understanding of RECP technology opportunities improved at national and regional levels	<ul> <li>4 promotion and information events and training courses on RECP technologies carried out</li> <li>8 requests for assistance in the development and transfer of RECP technologies</li> </ul>	<ul> <li>1 promotion and information event and training course on RECP technologies carried out</li> <li>3 requests for assistance in the development and transfer of RECP</li> </ul>	<ul> <li>2 promotion and information events and training courses on RECP technologies carried out</li> <li>3-4 requests for assistance in the development and transfer of RECP</li> </ul>	<ul> <li>1 promotion and information event and training course on RECP technologies carried out</li> <li>1 request for assistance in the development and transfer of RECP</li> </ul>

	received from target industries  4 service providers contacting the CPC and getting involved in RECP technologies transfer and application	technologies received from target industries  2 service providers contacting the CPC and getting involved in RECP technologies (2 steam trups/filters)	technologies received from target industries  1 service provider contacting the CPC and getting involved in RECP technologies	technologies received from target industries  1 service provider contacting the CPC and getting involved in RECP technologies
4.3. RECP technology opportunities are identified as part of RECP assessments	**	<ul> <li>4 RECP technology assessments in companies per year and regional Centre</li> <li>4 technology options identified in each RECP assessment</li> <li>10 feasibility studies for RECP technology options conducted per year within RECP assessments</li> </ul>	<ul> <li>6 RECP technology assessments in companies per year and regional Centre</li> <li>4 technology options identified in each RECP assessment</li> <li>10 feasibility studies for RECP technology options conducted per year</li> </ul>	<ul> <li>6 RECP technology assessments in companies per year and regional Centre</li> <li>4 technology options identified in each RECP assessment</li> <li>10 feasibility studies for technology option conducted per year</li> </ul>
4.4. Agreements and financial mechanisms to support RECP technologies developed and implemented	<ul> <li>2 new agreements reached</li> <li>4 projects identified, considered and financed</li> <li>8 Representatives of banks attended a specific RECP course for financial institutions</li> </ul>	<ul> <li>1 new agreement reached</li> <li>8 Representatives of banks attended 1 specific RECP course for financial institutions</li> </ul>	<ul> <li>1 new agreements reached</li> <li>2 projects identified, considered and financed</li> <li>8 Representatives of banks attended 1 specific RECP course for financial institutions (optional)</li> </ul>	<ul> <li>2 projects identified, considered and financed</li> <li>8 Representatives of banks attended 1 specific RECP course for financial institutions (optional)</li> </ul>
	<b>Logframe 2016-2018</b>	Achieved in 2016	2017	2018
4.5. Economic and environmental benefits of RECP technology adaptation, development and transfer verified	<ul> <li>50 RECP technology options implemented in target companies</li> <li>25 RECP options implemented and evaluated/monitored in terms of water, material, energy and money savings</li> </ul>	<ul> <li>10 RECP technology options implemented in target companies in 2016</li> <li>20 RECP options implemented in 2016 and evaluated/monitored in terms of water, material, energy and money savings</li> </ul>	<ul> <li>25 RECP technology options implemented in target companies</li> <li>20 RECP options implemented and evaluated/monitored in terms of water, material, energy and money savings</li> </ul>	<ul> <li>15 RECP technology options implemented in target companies</li> <li>20 RECP options implemented and evaluated/monitored in terms of water, material, energy and money savings</li> </ul>

•	80	REC	ot of	otions	from
	prev	ious F	RECP	assess	sments
	eval	uated/r	nonit	ored	

- 4.6. Stakeholder platform to support RECP technology adaptation, development and transfer has been established and is taking an active role in advocating RECP technologies at company level
- 1 Knowledge management and database on RECP technology providers established and maintained
- 3 events focusing on the development of RECP technologies and their implementation in target sectors conducted
- 9 37 RECP options from previous RECP assessments implemented and evaluated/monitored
- 1 Knowledge management and database on RECP technology providers established and maintained 1 event focusing on the
- 1 event focusing on the development of RECP technologies and their implementation in target sectors conducted (Odesa)
- 27 RECP options from previous RECP assessments evaluated/monitored (ongoing)
- 1 Knowledge management and database on RECP technology providers established and maintained
- 1 event focusing on the development of RECP technologies and their implementation in target sectors conducted
- 16 RECP options from previous RECP assessments evaluated/monitored
- 1 Knowledge management and database on RECP technology providers established and maintained
  - 1 event focusing on the development of RECP technologies and their implementation in target sectors conducted

## **ANNEX 2: STAFFING**

## **Core team of the Centre**

Number	Name, year of birth	Degree/education	Specialization in	Responsible for	Region
1.	Igor Shylovych	Specialist / graduated from NTUU KPI	Heat Engineering	Director, Overall Management of the Centre, RECP Specialist	All regions
2.	Valeriy Pavshuk	Specialist / graduated from NTUU KPI	Electric Engineering	Technical director Responsible for awareness raising and technical issues, also conducting RECP audits	All regions
3.	Olexiy Tchaykovsky	Specialist / graduated from NTUU KPI	Foundry	Coordinator in Kyiv region Responsible for trainings (WS) for trainees, overall Quality of RECP assessments at company level	Kyiv region
4.	Vitaliy Krukovskiy	Heat Engineer, Heat Engineering NTUU KPI	Heat Engineering	Assistance in sector-specific in-plant assessment at company level; Responsible for technical issues (in-plant assessments, technical options development)	All regions
5.	Tetiana Degodya	Mechanical Engineering, Chemical Engineering Faculty / NTUU "KPI"	Mechanical Engineering	Administrative Assisstant Responsible for administrative support of the Centre including contract documents preparation	Kyiv region
6.	Anna Ivaneta	Specialist's degree, Kyiv National Linguistic University.	Translation/interpretation and Philology of the English and French languages	Office Management and Assistance for Event Manager Responsible for administrative support of the Centre including reporting, project description and translation.	Kyiv region
7.	Anton Kleshchov	Expert on Energy Efficiency and Energy Saving, Electric Engineer	Electric Engineering	Technical expert Responsible for technical issues (in-plant assessments, technical options development), engineering support related to the electricity use	All regions

# **Pull of National Experts**

Number	Name, year of birth	Degree/education	Specialization in	Under this subcontract responsible for	Location	Contract I and type	Ouration
1.	Andrii Vorfolomeiev	PhD – Water Treatment Technology / NTUU "KPI"	Electromechanical Engineering	National expert on RECP Responsible for web-site and the EaP Green Project coordinator, technical support	Kyiv	Part-time months Contract RECPC	12 with
2.	Dmytro Yanushkevich	Master's Degree in Measurement Devices, Device Building Faculty / NTUU KPI	Technical specialist on measurement equipment	Maintenance of the measurement equipment in Kyiv Office	Kyiv	Part-time months Contract RECPC	12 with
3.	Eugen Novakovskiy	Cand.Tech.Sci. / Odessa National Polytechnic University	Heat Engineer, Expert in Energy Efficient Solutions	Engineering support for the companies/ Norway Project training coordinator	Kyiv	Part-time months Contract RECPC	12 with
4.	Iryna Zayachuk	Master's Degree in International Affairs with specialization in International Economics, Ohio University, Ohio	International Economics, Financing	Administration, IPA and pre- assessment supervising, contracts support in Lviv Region	Lviv	Part-time months Contract RECPC	12 with
5.	Ivan Tytovski	Master/Kharkiv Regional Institute of Public Administration of the National Academy of Public Administration attached to the Office of the President of Ukraine	State Administration	Assistance to the Coordinator in Kharkiv Region	Kharkiv	Part-time months Contract RECPC	6 with

6.	Kostyantin Tadlya	PhD in Heat Engineering/ graduated from NTUU "KPI"	Engineering Thermophysics	Leading Energy Engineer Support on technical issues (in-plant assessments, technical options development)	Kyiv	Full-time 12 months Contract with RECPC
7.	Maria Brozhko	Master's Degree in Organization and administration/ Kyiv National Linguistic University	Administration	Assistance to the Coordinator in Lviv Region	Lviv	Part-time 12 months Contract with RECPC
8.	Oleksandra Kolmogortseva	Master / graduated from Taras Shevchenko National University of Kyiv	Hydrometeorology, Climatology, Ecology	Assistant to Director of the RECPC, Responsible for Calls searching on international projects and project applications preparing, supports the Director in Reports writing. Policy work: participation in Working groups on Environmental Policy development and Energy Efficiency	Kyiv	Full-time 12 months Contract with RECPC
9.	Olena Pushna	PhD Student/ Institute for Problems in Materials Science (IPMSNASU)	UNIDO Certified National CP Expert	National expert on RECP	Kyiv	Full-time 5 months Contract with RECPC
10.	Sergey Khudobin	Master / graduated from Kyiv University of Internal Affairs of Ukraine	Corporate Security	National expert/Coordinator in Kharkiv Region	Kyiv	Part-time 12 months Contract with RECPC
11.	Sergey Kochemirovsky	Specialist/ Odessa State Economic University	Economics and Audit	Coordinator in Odesa Region	Odesa	Part-time 8 months Contract with RECPC
12.	Sergiy Kalachov	Diploma Engineer / graduated from Zaporizhzhia National Technical University	Electric Engineering	Coordinator in Zaporizhzhia Region: Administration, IPA and pre- assessment supervising, contracts support	Zaporizhzh ia	Full-time 12 months Contract with RECPC

13.	Svetlana Chunikhina	MA (Social and Political Psychology) / Kharkiv National University	PR, communication and Public Administration	National Expert in communication and Event manager, Gender Focal Point	Kyiv	Full-time 12 months Contract with RECPC
14.	Taras Sakalosh	Specialist / graduated from NTUU "KPI"	Radio Engineering	Executive Director of the RECPC, Administration, reporting, financial reporting, policy work. Responsible for the GIZ project.	Kyiv	Full-time 12 months Contract with RECPC
15.	Tetyana Knyazkova	Ph.D/ Kiev Institute of Civil Engineers	Water supply and sewerage	National Expert on Water Management	Kyiv	Full-time 12 months Contract with RECPC
16.	Valentyna Sobkovich	Master / graduated from Interregional academy of management and law	Accounting, audit	Provision of accounting services, provision of audit services, responsible for the center account	Kyiv	Part-time 12 months Contract with RECPC
17.	Valeriy Redchik	Specialist / graduated from Vinnitsa Technical University	Radio Engineering	Coordinator in Vinnytsia Region, Administration	Vinnytsia	Full-time 12 months Contract with RECPC
18.	Vasyl Prusak	Engineer/ Lviv Politechnic Institute	System Engineering	Energy-efficiency Expert, technical specialist for complex investigation of the industrial companies/ buildings	Lviv	Part-time 11 months Contract with RECPC
19.	Vladimir Korovai	Diploma of Engineer / Zaporizhzhia State Engineering Academy	Energy and Energy saving	Assistance in sector-specific in-plant assessment at company level;	Zaporizhzh ia	Part-time 8 months Contract with RECPC
20.	Yuriy Gaidayenko	Master / graduated from NTUU "KPI"	Electric Engineering	In-plant assessments, trainings conducing for new trainees	Kyiv	Part-time 12 months Contract with RECPC
21.	Yuriy Yuriev	Diploma Engineer / Zaporizhzhia State Engineering Academy	Energy management. Energy and Energy Efficiency	Assistance in sector-specific in-plant assessment at company level; assistance on energy efficiency	Zaporizhzh ia	Part-time 12 months Contract with RECPC

# ANNEX 3 LIST OF THE ADVISORY BOARD MEMBERS

	Name	Organization	Position Held
1.	Mr. Jurii Khomenko	The Ministry of Agrarian Policy and Food of Ukraine	Head of Energy and Alternative Fuel Management Technology Policy in Agriculture Department of Agriculture and Technology Policy in AIC
2.	Ms. Liudmila Musina	The Ministry of Economic Development and Trade of Ukraine	UNIDO project coordinator in Ukraine, Advisor to the Minister
3.	Ms. Nataia Trofimenko	The Ministry of Ecology and Natural Resources of Ukraine	Head of the Strategic Planning Department
4.	Mr. Sergii Pahalchuk	The Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine	Deputy Director of Renewable Energy - Head of Science and Technology Policy
5.	Ms. Tetiana Karpenko	Ministry of Energy and Coal Industry of Ukraine	Head of Coordinating Research and Environmental Protection, Metrology, Standardization and Accreditation
6.	Mr. Viktor Shevkaliuk	Ministry of Education and Science of Ukraine	Director of the Department of Innovation and Technology Transfer
7.	Mr. Valerii Iliasov	The State Agency on Energy Efficiency and Energy Saving of Ukraine	Deputy Director of the Department of Renewable Energy - Head of the Department of Science and Technology Policy
8.	Mr. Vasilii Krutov	Ukrainian League of Industrialists and Entrepreneurs	Vice-President
9.	Mr. Sergii Khudobin	Ukrainian League of Industrialists and Entrepreneurs	Director of the Department of the Corporate Safety
10.	Mr. Sviatoslav Kurilenko	Ukrainian Chamber of Commerce and Industry	Assistant to the President
11.	Mr. Evgen Nesen	Kyiv Municipal State Administration	Deputy Director of the Department of the Economic Development and Trade
12.	Mr. Genrikh Svintsitskii	Kyiv Regional State Administration	Head of Business Development Department of Economic Development and Trade
13.	Mr. Segrii Novosielov	The Nordic Environment Finance Corporation (NEFCO)	An expert in financing energy efficiency projects
14.	Ms. Dagmar Ecer	The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Director of the Support Program of green modernization of the Ukrainian economy

15.	Mr. Igor Kyrylchuk	Global Environmental Faculty (GEF), UNIDO project "Improving energy efficiency and promoting renewable energy in the agro-food and other small and medium enterprises (SMEs) in Ukraine"	National Coordinator of the Project
16.	Mr. Oleksandr Mykolaiovuch	The National Bank of Ukraine	Head of the Project Management Group
17.	Ms. Yelizaveta Gavrylenko	The International Chamber of Commerce (ICC Ukraine)	Deputy Director of Department of Foreign Economic Activities, ICC Ukraine
18.	Mr. Viachslav Bykovets	The Union of the Entrepreneurs of Small, Middle- Sized and Privatized Enterprises of Ukraine	Vice-President, General Director
19.	Mr. Evgen Ogorodnyk	National Technical University of Ukraine "Kyiv Polytechnic Institute"	Coordinator of the H2020 NCP «Climate action, resource efficiency and raw materials»
20.	Mr. Segrei Sydorenko	National Technical University of Ukraine "Kyiv Polytechnic Institute"	Vice-rector for Scientific and Pedagogical (International Relations), Professor
21.	Mr. Valerii Barbash	National Technical University of Ukraine "Kyiv Polytechnic Institute"	Vice-Rector for Scientific and Pedagogical Work, PhD in Chemical Science, Associate Professor, Deputy
22.	Mr. Volodymyr Gryshechkin	The Union of Chemists of Ukraine	Director
23.	Mr. Volodymyr Gnat	Science Park "Kyivska Polytekhnika"	General Manager
24.	Mr. Andrii Kitura	Ernst & Young Ukraine	Senior Consultant, Department of Clean Technologies and Sustainable Development EY
25.	Mr. Igor Shylovych	Resource Efficient and Cleaner Production Centre	Director of the Centre

# ANNEX 4: LIST OF THE STEERING COMMITTEE MEMBERS

	Name	Organization	Position held
1.	Representative of the Swiss Cooperation Office	Swiss Cooperation Office Ukraine	
	Ukraine		
2.	Representative of the Austrian Embassy in Ukraine	Austrian Embassy in Ukraine	
3.	Petra Schwager	United Nations Industrial Development Organization (UNIDO)	Industrial Development Officer
4.	Mykhaylo Zgurovsky	National Technical University of Ukraine "KPI"	Rector
5.	Anatoliy Kinakh	Ukrainian League of Industrialists and Entrepreneurs (ULIE)	President
6.	Volodymyr Gnat	"Kyivska Politekhnika" Science Park	Director General
7.	Igor Shylovich	RECPC	Director of RECPC
			Secretariat of the Steering Committee Members

# **ANNEX 5. LIST OF COMPANIES**

# Overview of companies involved in RECP project in Kyiv region in 2015-2016

#	Enterprise (Kyiv region)	Economic Sector/Process assessed	
1.	Restaurant "European Dom Vkusa"	Restaurant/energy saving for conditioning and ventilation, electrical energy saving with lighting modernization	
2.	Building of Desnianska District State Administration in Kyiv	Administrative building	
3.	LLC "Wood processing enterprise Gelicom LV"	Wood processing/energy saving with drying equipment modernization	
4.	Scientific and Production Centre "Elastic"	Chemical production/energy saving for rubber manufacturing	
5.	State higher education institution "Kyiv electromechanical college"	Educational institution building/heat insulation of the building, heat supply system modernization, heat supply station installation	
6.	Small Enterprise "Company PTK" Ltd. ("Disla")	Wheels production/minimization of energy consumption for the melting processes, aluminium mix minimization in the product	

# Overview of companies involved in RECP project in Vinnytsia region in 2015-2016:

#	Enterprise (Vinnytsia region)	Economic Sector/Process assessed
1.	LLC "Bratslav"	Diary company/decrease of electrical energy loss by the injection-molding machine
2.	LLC "Symvol"	Casting plant/electrical energy saving for the smelting process (old technology), rejected product decrease
3.	LLC "Briz-T"	Fish-processing/electrical energy saving with lighting modernization, liquid waste decrease
4.	Recreation Centre "Khmilnyk"	Fresh radon water consumption minimization
5.	Recreation Zone "Pivdennyi Bug"	Water consumption minimization
6.	LLC "MANN + HUMMEL FT Ukraine"	Filter production / monitoring measurements and verification of the options

# Overview of companies involved in RECP project in Zaporizhzhia region in 2015-2016

#	Enterprise Zaporizhzhia region)	Economic Sector/Process assessed
1.	LLC "Mining company Mineral"	Mining company/decrease of electrical energy loss by transformer
2.	LLC "Pharmatsia-Zaporizhzhia"	Pharmaceutical warehouse / heat losses
3.	OJSC "Zaporizhzhia instrumental plant of Voikova"	Foundry production/decrease of electrical energy loss
4.	OJSC "Zaporizhzhia cable plant"	Cables and conductors production/optimization of the feed system work
5.	OJSC "Zaporozhvognetryv"	Fire Bricks Production
6.	OJSC "Ukrgraphit"	Electrode Production

# Overview of companies involved in RECP project in Lviv region in 2015 - 2016

#	Enterprise (Lviv region)	Economic Sector/Process assessed	
1.	LLC "Vesna Zahid"	Consumer goods industry/steam generating systems and ventilation systems modernization, decrease of electrical energy loss by transformer	
2.	Public House of Elderly	Building of the Public house/heat insulation of the building, heat supply system balancing	
3.	LLC "Inter PET"	Recyclable materials company/decrease of electrical energy loss by transformer, washing system modernization	
4.	PJSC "GALENERGOBUDPROM"	Construction materials production/decrease of electrical energy loss by transformer, compression machinery work optimization	
5.	Inter PAK	Packing materials production/replacement of glue for new glue material	

# Overview of companies involved in RECP project in Odesa region in 2015 - 2016:

#	# Enterprise (Odesa region)		Economic Sector/Process assessed		
	1.	Izmail Military Liceum-Boarding School	Building of the education institution/heat insulation of the building, heating services modernization		

# Overview of companies involved in RECP project in Kharkiv region in 2015 - 2016:

#	#	Enterprise (Kharkiv region)	Economic Sector/Process assessed
	1.	Dormitory #1 of the Kharkiv regional institute of state management of the National Academy of State Management under the President of Ukraine	
	2.	LLC "Likhachev furniture factory"	Furniture plant/ventilation equipment modernization, heating system modernization for factory shop floor, optimization of electricity use

# Overview of companies involved in RECP project in Dnepropetrovsk region in 2016:

#	Enterprise (Dnepropetrovsk region)	Economic Sector/Process assessed	
1.	LL "Spectekhosnastka"	Plastic materials production/electricity consumption minimization for pumping equipment, minimization of wastes	
2.	2. LLC "TM.WeldTech" Welding wire production/furnace and equipment modernization		
3.	OJSK "Dnepropetrovsk furniture combinate"	Furniture production/use of waste as a material in production process, air recuperation equipment installation, heat insulation of the building	
4.	LLC "Meat processing factory "Premier"	Meat-processing industry/energy losses in refrigerators, decrease of electrical energy loss by transformer	
5.	LLC "Automobile operating company 31231"	Automobile operating company/heat modernization of the building	
6.	OJSC "Kharchoprom (Malbi)"	Confectionary factory / heat modernization of the building, utilization of the heat losses in production for heating of the premises	

# ANNEX 6. NATIONAL CAPACITY BUILDING

## WORKSHOPS FOR TRAINEES IN 2016

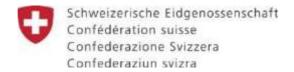
Regions	Kyiv	Vinnytsia	Zaporizhzhia	Odesa	Lviv	Kharkiv
Coordinator	Olexiy	Valeriy Redchik	Sergiy Kalachev	Sergii	Iryna Zayachuk	Sergii Khudobin
	Tchaykovskyi			Kochemyrovskyi		
A short description of	Pre-assessments resu	lts, material and energ	y flows, water consump	otion. Brainstorming an	d identification of tech	nical solutions.
the training course	Results of in-depth as	ssessment of companie	es and preliminary conc	elusions		
Number of trainings	22 WS conducted	28 WS conducted	6 WS conducted	10 WS conducted	5 WS conducted	5 WS conducted
Trainers	Igor Shylovych,	Valeriy Pavshuk,	Valeriy Pavshuk,	Valery Pavshuk,	Taras Sakalosh,	Valery Pavshuk,
	Olexiy	Valeriy Redchik,	Sergiy Kalachov	Tetyana Knyazkova	Tchaykovskyi,	Tetyana Knyazkova
	Tchaykovskyi,	Tetyana			Valeriy, Vitalii	
	Valeriy Pavshuk,	Knyazkova,			Krukovskyi	
	Tetyana Knyazkova	Olena Pushna,				
		Dmytro Redchik				

Materials developed and available for use	Toolkits were published and disseminated among the trainees; a questionnaire on pre-assessment results was developed; examples of presentations and reports were disseminated among experts	Methodology of the development and introduction of RECP model for managers	Toolkits were published and disseminated among the trainees; a questionnaire on pre-assessment results was developed; examples of presentations and reports were disseminated among experts	Toolkits were published and disseminated among the trainees; a questionnaire on pre-assessment results was developed; examples of presentations and reports were disseminated among experts		
# of CP trainees participated WS	15 trainees	10 trainees	17 trainees	15 trainees	9 trainees	9 trainees
# of trainees successfully accomplished the training course and nominated for certification	15 trainees	10 trainees	12 trainees	6 trainees	9 trainees	9 trainees
How many trainees want to continue working with the Centre?	9 trainees	4 trainees	4 trainees	6 trainees	9 trainees	9 trainees
Lessons learnt		influence the trainees' erence materials for the		ut not a team building.	Training materials are s	ufficient but may be

## TRAINING FOR TRAINERS

Supported by:







## TOT, Kyiv, July 2016

Summary and purposes of the training

## **ToT Topic: Winning good business**

This mission had 2 major aims: Presentation of Christoph Hugi:

- Overview of data systematization approach at the corporation server;
- Detailed explanation of systematic approach to folder structures;
- Information transfer on labeling of project proposals and further documentation associated with project execution, and;
- Discussion of problematical situations that may be expected in the future.
- 1. Presentation of Emmanuel Oertlé:

Presentation "Proposal Process A  $\rightarrow$ Z";

- Awareness + Search for Opportunities;
- Screening and Eligibility Check;
- Partners / Consortium;
- Proposal Writing, and;
- One author + many contributors;
- 2. Individual proposal review:
  - Christoph Hugi did review on project proposal draft "Blue Technology: Transfer of innovative solutions to sea basin economies" with Alla Marchenko;
  - Christoph Hugi did review on project proposal draft "INTERREG Danube Transnational Programme" with Igor Shylovich;
  - Emmanuel Oertlé did review on project proposal draft "Gender Equality" with Svetlana Chunikina, and;
  - Emmanuel Oertlé did review on possible project concept in field of water treatment with Tatyana Knyazkove;

## TOT Participants

	Name	Institution	E-mail
1.	Emmanuel Oertlé	Research Associate Gründenstrasse 40 CH-4132 Muttenz Switzerland	emmanuel.oertle@fhnw.ch
2.	Christoph Hugi	Research Associate Gründenstrasse 40 CH-4132 Muttenz Switzerland	christoph.hugi@fhnw.ch
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10	Andrii Vorfolomeiev	RECPC Ukraine	a.vorfolomeiev@recpc.org

## TOT, Kyiv, April 2016

Summary
and purposes
of the
mission

# Topic of the training: RECP option generation for agribusiness and food industry

Presentation of Johannes Fresner

- 1. Presentation of Valerii Redchyk:
  - Overview of potential at Vinnytsya region;
  - Leading meat and bread manufacturers;
  - Issues with deterioration of soil, options of fertilization;
  - Potential for improvements;

Presentation of Johannes Fresner:

- 2. Discussion of upcoming legislation changes in EU. New laws such as:
  - A common EU target for recycling 65% of municipal waste by 2030:
  - A common EU target for recycling 75% of packaging waste by 2030;
  - A binding landfill target to reduce landfill to maximum of 10% of all waste by 2030;
  - A ban on landfilling of separately collected waste;
  - Promotion of economic instruments to discourage landfilling;
  - Simplified and improved definitions and harmonized calculation methods for recycling rates throughout the EU;
  - Concrete measures to promote re-use and stimulate industrial symbiosis - turning one industry's by-product into another industry's raw material;
  - Economic incentives for producers to put greener products on the market and support recovery and recycling schemes (for packaging, batteries, electric and electronic equipment, vehicles);
- 3. Review of informational sources for average data indicators in different fields of manufacturing:
  - Closer look at Reference documents under the IPPC Directive and the IED (http://eippcb.jrc.ec.europa.eu/reference/);
  - Patterns on how to use these data and how to involve more companies to use RECP at their manufacturing lines;
  - IFC database;
- 4. System of proper measurement performance:
  - Case: overflow from sterilizer at manufacturing side;
  - Implementation of ultrasonic flow meters;

- Background for implementation of continuous monitoring and data collection;
- 5. Overview of juices and concentrates manufacturing:
  - Technical process of multistage evaporation;
  - Closer look at effect of number of stages for multi-effect evaporator;
- 6. Review on ventilation systems and breakthroughs in this field:
  - Review of ventilation system at pig farm;
  - Possible issues with RECP and solutions to them:
  - Overview of typical mistakes in heat exchange at piglets pavilion;
- 7. Overview of meat processing plant structure:
  - RECP options for efficient lighting at workspace;
  - Plate foresters as alternative for regular fridges in the process of deep freezing;
- 8. Overview of diaries production:
  - Efficient cleaning options;
  - Overview of milk production line;
  - Case study: Freskaleche;
  - Detailed process of pasteurization;
  - How to improve use of Pasteurizer;
- 9. Vegetable production:
  - Review or water consumption and waste generation;
  - Easy solutions for smart people;
- 10. Review of generated RECP options developed for specific enterprises;
- 11. Closer look to the problems of resource use optimization at bakeries and pastries;
  - Heat recovery from cooling compressors;
  - Husk as fuel;
  - Heat recovery from bean toaster;
  - Sealing cold rooms;
- 12. Overview of possible improvements at vegetable oils manufacturing:
  - Implementation of suitable preventive maintenance programs;
  - Regular boiler tuning and maintenance;
  - Proper insulation of steam pipes;
  - Heat recovery from boiler blow down;
  - Utilization of steam condensate;
  - Closed cooling etc.
- 13. Discussion of technical assignments/terms of reference and identified needs at the companies.
- 14. Breweries:
  - Successful examples of improvements in water and heat consumption;
- 15. Composting and biogas review:
  - Example of biogas use and issues associated with it;
  - Bio gas reactors, technological design;

- 16. Ideas for Cleaning of working space;
- 17. Brain storming session regarding differences in manufacturing approaches of Japan, Austria and Ukraine

# TOT Participants

	Name	Institution	Email
1. 1	Johannes Fresner	Environmental Consultancy &	johannes.fresner@stenum.at
		Research Company Ltd.	
2.	Igor Shylovich	Director of RECPC Ukraine	shil3011@ukr.net
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6.	Andrii Vorfolomeiev	RECPC Ukraine	a.vorfolomeiev@recpc.org
7.	Svitlana Chunikhina	RECPC Ukraine	s.chunikhina@recpc.org
8.	Anna Ivaneta	RECPC Ukraine	Ann5946@ukr.net
9.	Alla Marchenko	RECPC Ukraine	Marchenko_alla@yahoo.com

# $Study\ tour\ in\ Switzerland-List\ of\ Participants$

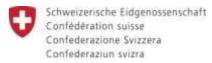
	Name	Title
1.	Mr. Olexiy A. Tchaykovs`ky	Coordinator regional activities Kyiv, CP expert, RECPC Kiev
2.	Mr. Andrii Vorfolomeiev	National CP Expert, RECPC Kiev
3.	Mr. Yurii Gaidaienko	National CP Expert, RECPC Kiev
4.	Mr. Anton Kleshchov	Electric engineer, RECPC Kiev
5.	Mr. Yuriy Yuriev	Energy Engineer, Ukrgrafit company
6.	Mr. Andrey Vahin	Deputy General Director of Ecology, Ukrgrafit company
7.	Ms. Iryna Zayachuk	Coordinator in Lviv region, RECPC Lviv
8.	Ms. Alla Marchenko	LCA engineer, RECPC Kiev

## Study tour in Switzerland 2016

## Supported by:









Summary and purposes of the mission The purpose of the study tour is to visit some key enterprises and infrastructures in Switzerland with complementary workshops and presentations, so that Ukrainian experts get an insight of the Swiss industry, stand of technology and RECP-related efforts. The focus of the week will be mostly on food processing and waste to energy.

Duration of the study tour 22-27 August 2016

3. Monday 22 August:



- 18-00 visit of Ueli Brauerei
- Discussion of local beer production and focus on RECP;
   During company visit were noticed important difference between
   Ukrainian and Swiss manufacturers: In Switzerland the company have to use heat recovery if it has washing processes.

## Differences:

- The waste management: they give the waste to cows. In Ukraine we do almost the same, but we sell it;
- There is heat supply from the local heat network, but there are no heat counters at the enterprise. In in the case there are a lot of heat coming around in the technology process, one of Ukrainian breweries installed heat counters and they began paying less;

## Similar in:

- The technology;
- The equipment;
- Water treatment;
- 4. Tuesday 23 August:



- 14-00 visit of Pouly Bakery
- Discussion of local bread production and focus on RECP;
   Highlighted RECP measures: usage of self-assessment tools and questioners; good housekeeping; cleaning by compressed air;
  - During visit were noticed lighting system issues;
  - Interesting difference: usage of wood for baking.

## Key conclusions:

- 1) Energy is only 1-2 % from the cost of the product. And they are focused on the changing of lighting lamps at the moment;
- 2) There is the reason, why they should consume more if they consume more than 100 MWh, the price is less on the general Electric power market;
- 3) The new equipment has given considerable growth in economy of the enterprise.

### Visit to SBA:

Discussion of the project search, implementation and possible financial opportunities;



- 5. Wednesday 24 August:
  - 9-30 visit to Basel incineration plant with heat recovery and district heating



## Key figures:

- The main compositions of municipal waste in Switzerland are:
  - natural products 32%;
  - paper and carton 17%;
  - composite materials 13%;
  - plastic 13%;
- The ratio between household and recyclable waste in Basel is about 50/50. Basel produces 225'000 tons of waste per year (45 Mio bin bags of 35 liters | 5 kg per bag)
- The average caloric value of waste is 11.5 MJ/kg.
- Energy input 227 000 t/a waste 720 GWh/a =100% Energy output:
  - District heat 415 GWh/a = 58%;
  - Steam 68 GWh/a = 10%;
  - Electricity 55 GWh/a = 7%;
  - Auxiliary electricity 26 GWh/a = 4%;
  - Production excess 39 GWh/a = 5%;
  - Unused energy 117 GWh/a = 16%;
  - The heat is given to the local heating network. There is a

problem in summer with to much heat energy.

### Differences:

Very clean air, almost no smell. This is because the air from the place where the waste comes is sucked into the burner. Arriving the plant the wastes are already separated.

- 14-00 visit to Biogas Plant:
  - The waste is already separated;
  - The technology process lasts for 14 days. ¼-th of the "waste" goes again into the process. So actually there is no waste.
  - The methane concentration is 60-65%. To increase this numbers up to 97-98% they use special filtering membranes (at the disposal of another company).

## Key figures:

- 1) 1 ton of waste gives 100 m3 of biogas.
- 2) The technology processes are all automated. There are only 2 people who work there.
- 3) 80 % of benefits are charges from farmers, 20 % generated gas.
- 4) From 16 000 t of income waste they obtain 10 000 t of liquid output and 5 000 6 000 t of solid output. These output are used as fertilizers.

## Key differences:

- 1) In Switzerland farmers have to treat their wastes.
- 2) In Ukraine our farmers produce biogas. So there is no need to find the resources they just have them already.
- This plant collects the rain water. Last rainy year they almost didn't use water from the local water-supplying network.
- 16-30 visit of Natural gas expansion plant:

## Key findings:

- The effect is achieved due to the gas expansion on the turbine at the pressure difference (2 MWh/40 m3 of gas at the pressure difference from 70 to 5 bar);
- The technology is simple but not perfect. And they said if they build new station they would not provide it with such technology again;
- In Ukraine we don't use such technology;
- 6. Thursday 25 August:
  - 10-00 visit of the Wander food production plant:

## Key figures:

- They produce 16'000 tons of products in general and use;
- 6'000 tons of barley;
- 3'000 tons of sugar;
- 4'000 tons of milk stuff;
- 1 Mio m<sup>3</sup> of oil and some amount of electricity per 1 year;
- 1,5% of the packaging materials goes to waste;

## **RECP** implementation:

✓ Good process control and monitoring. They have 700 valves and motors and 4'000 sensors;

- ✓ The technology process is highly automated;
- $\checkmark$  Housekeeping is behind brilliant automation;
- ✓ Motivating of workers to be more efficient (good housekeeping);
- ✓ Modern technologies: fully automated warehousing system.

## 7. Friday 26 August:

- 8-30 visit of Carbotech AG

## Workshop and training on:

- ✓ Organization of an environmental consulting company;
- ✓ Concrete testing for Asbestos and other substances;
- ✓ Lifecycle Assessment (LCA) PEER tool;
- ✓ Presentation of Reffnet;

## Participants:

	Name	Institution	Email	Dates
1	Emmanuel Oertlé	Research Associate Gründenstrasse 40 CH-4132 Muttenz Switzerland	emmanuel.oertle@fhnw.ch	22-27 of August 2016
2	Christoph Hugi	Research Associate Gründenstrasse 40 CH-4132 Muttenz Switzerland	christoph.hugi@fhnw.ch	22-27 of August 2016
3	Olexiy A. Tchaykovs`ky	Coordinator regional activities Kyiv, CP expert, RECPC Kiev	olexiytc@yahoo.co.uk	22-27 of August 2016
4	Andrii Vorfolomeiev	National CP Expert, RECPC Kiev	vorfolomeiev@ukr.net	22-27 of August 2016
5	Yurii Gaidaienko	National CP Expert, RECPC Kiev	yuriygaid@ukr.net	22-27 of August 2016
6	Anton Kleshchov	Electric engineer, RECPC Kiev	anton.kleschov@gmail.com	22-27 of August 2016
7	Yuriy Yuriev	Energy Engineer, Ukrgrafit Company		22-27 of August 2016
8	Andrey Vahin	Deputy General Director on Ecology, Ukrgrafit company	vagin@ukrgrafit.com.ua	22-27 of August 2016

9	Iryna Zayachuk	Coordinator in Lviv region, RECPC Lviv	iryna@banklviv.com	22-27 of August 2016
10	Alla Marchenko	LCA engineer, RECPC Kiev	marchenko_alla@yahoo.com	22-27 of August 2016

Annex 6b

# Certificate

This is to certify that

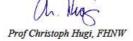
## Mr Olexiy A. Tchaykovs'ky

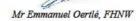
participated in the study tour with a focus on food processing and waste to energy that took place in Switzerland 22-27 August 2016.

Main content of the study tour was:

- visit of key enterprises and infrastructures in Switzerland diverse RECP-related workshops and presentations
- insight of the Swiss industry
- overview of the stand of technology

The study tour took place in the frame of the collaboration between the Resource Efficient and Cleaner Production Centre (RECP), the companies Carbotech, Sustainable Business Associates (SBA), CSD Engineers, with the support of the University of Applied Sciences and Arts Northwestern Switzerland (FHNW) and the United Nations Industrial Development Organization (UNIDO).



















Example of the Certificate of Swiss Study Tour participation

# ANNEX 7. OVERVIEW OF INFORMATION DISSEMINATION AND AWARENESS RAISING ACTIVITIES, PR MATERIALS

Topic	Type of activities	Results + positive impact to the project achieved		
Awareness raising for companies and public s	Awareness raising for companies and public sector			
<b>1. Final Conference</b> "Resource efficiency of the enterprises in <b>Odesa region</b> ", December 20 <sup>th</sup> , 2016		<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>29 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises with RECP Certificates</li> <li>50 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>		
2. Final Conference "Resource efficiency of the enterprises in Kyiv region", December 14 <sup>th</sup> , 2016	Final Conference Organization	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>150 participants (representatives from UNIDO, industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises and trainees with the RECP certificates; awarding enterprises and trainees - participants of the EaP Green Project</li> <li>100 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>		
3. Final Conference "Resource efficiency of the enterprises in Kharkiv region", December 13 <sup>th</sup> , 2016	Final Conference Organization	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>42 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises and trainees with the RECP Certificates</li> <li>50 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>		
4. Final Conference of the "Ukraine –	Final Conference	Awareness raising of the RECP projects results		

Topic	Type of activities	Results + positive impact to the project achieved
<b>Norway" Project</b> : "Retraining and social adaptation of military personnel and their family members in Ukraine", Kyiv, December 9 <sup>th</sup> , 2016	Organization	<ul> <li>38 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding trainees with RECP Certificates</li> <li>50 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>
5. Information dissemination seminar on the Resource Efficient and Cleaner Production for students at the Geography Faculty of the National Taras Shevchenko University, Kyiv, December 7 <sup>th</sup> , 2016	Joined organization with the National Taras Shevchenko University of Kyiv	<ul> <li>Awareness raising of the RECP projects results</li> <li>35 participants (representatives from the university, students)</li> </ul>
<b>6. Technical Working Group meeting</b> on the USAID project "Municipal Energy Reform in Ukraine", <b>Kyiv</b> , December 7 <sup>th</sup> , 2016	Participation in the meeting	Awareness raising of the RECP projects results
<b>7. Final Conference</b> "Resource efficiency of the of enterprises in <b>Vinnytsia</b> region", December 6 <sup>th</sup> , 2016	Final Conference Organization	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>50 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises and trainees with RECP certificates</li> <li>50 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>
<b>8. Final Conference</b> "Resource efficiency of the enterprises in <b>Zaporizhzhia</b> region", November 30 <sup>th</sup> , 2016	Final Conference Organization	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>71 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises and trainees with RECP certificates</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
		• 50 brochures about the Centre and 50 RECP methodology materials were distributed
<b>9. Final Conference</b> "Resource efficiency of the enterprises in <b>Lviv</b> region", November 25 <sup>th</sup> , 2016	Final Conference Organization	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>41 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises and trainees with the RECP certificates</li> <li>50 brochures about the Centre and 50 RECP methodology materials were distributed</li> </ul>
<b>10.Award Ceremony</b> "Equality and mutual respect" for the support of women in politics and podium discussion "Gender strategies of political parties: perspectives and challenges", <b>Kyiv</b> , November 25 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the RECP projects results in Ukraine
11. Panel discussion on results of the Paris Agreement adoption and participation of Ukrainian delegation in negotiations during the COP 22 with the Ministry of Ecology and Natural Resources of Ukraine, <b>Kyiv</b> , November 23 <sup>rd</sup> , 2016	Participation in the Event	Awareness raising of the RECP project results in Ukraine
<b>12.Seminar</b> "Financing of the resource- and energy efficient projects in the industry and business", <b>Odesa</b> , November 17 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>22 participants (representatives from industries, government, NGOs, donors, financial organizations).</li> <li>50 brochures about the RECPC were distributed.</li> </ul>
<b>13.Seminar</b> "Resource and energy efficient technologies: new opportunities in the area of industrial equipment", <b>Odesa</b> , November 16 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>29 participants (representatives from industries, government, NGOs, donors, financial organizations).</li> <li>40 brochures about the RECPC were distributed.</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
<b>14. 22<sup>th</sup> Conference of Parties</b> to the United Nations Framework Convention on Climate	Participation in the International	Awareness raising of the results of the RECP projects in Ukraine
Change (COP 22), <b>Marrakesh</b> , Morocco, November 12-18 <sup>th</sup> , 2016	Conference	20 brochures about the RECPC were distributed
<b>15. Information Seminar</b> for the industry representatives and SMEs, <b>Dergachi</b> ,	Organization of the Event	Awareness raising of the RECP projects results in Ukraine
November 9-10 <sup>th</sup> , 2016	Lvent	40 brochures about the RECPC were distributed
<b>16.</b> Seminar "Fundraising for the resource efficient events for the SMEs of the Kharkiv	Organization of the Event	Awareness raising of the RECP projects results in Ukraine
region", <b>Kharkiv</b> , November 8 <sup>th</sup> , 2016		35 brochures about the RECPC were distributed
<b>17.</b> XVI International Economic Forum "Lviv region – factory for Europe", <b>Lviv</b> , November 4 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results of in Ukraine
18. VII European-Ukrainian Energy Day "Energetics and stereotypes: Gender, Safety, Corruption", Kyiv, 3 November, 2016	Participation in the Event	Awareness raising of the RECP projects results in Ukraine
<b>19. International investment business forum</b> "Energy efficiency and renewable energy", <b>Kyiv</b> , November, 1-2 <sup>nd</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in Ukraine
<b>20. Panel Discussion</b> "Woman in reformed and non-reformed law enforcements: problem or solution", <b>Kyiv</b> , October 28 <sup>th</sup> , 2016	Participation in the Discussion	Awareness raising of the RECP projects results in Ukraine
<b>21. Conference</b> "Low-carbon development in Ukraine", <b>Kyiv</b> , October 26 <sup>th</sup> , 2016	Participation in the Conference	Awareness raising of the RECP projects results in Ukraine
22. Information Seminar on RECP financial	Organization of the	Awareness raising of the RECP projects results in Ukraine
supporting mechanisms in Chernihiv, Chernihiv, October 26 <sup>th</sup> , 2016	Event	• <b>30 participants</b> (representatives from industries, government, NGOs, donors, financial organizations)

Topic	Type of activities	Results + positive impact to the project achieved
		• 30 brochures about the RECPC were distributed
<b>23.</b> Seminar with Finland at the ULIE, Kyiv, October 25 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the RECP projects results in Ukraine
<b>24. Forum</b> "Ukraine – country of entrepreneurs", <b>Kyiv</b> , October 21 <sup>st</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in Ukraine
<b>25. Seminar</b> "Increasing resource efficiency of the industrial enterprises of <b>Vinnytsia</b> region", October 20 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>30 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>30 brochures about the RECPC were distributed</li> </ul>
<b>26. International Forum</b> for the sustainable business development (GreenMind), <b>Kyiv</b> , October 19 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in Ukraine
<b>27. International Forum</b> on Integration and Cooperation "InCoForum", <b>Kharkiv</b> , October 11-12 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in Ukraine
<b>28.Seminar</b> "Attracting financing/ investments for resource-efficient events for SMEs of the <b>Kharkiv</b> region", October 11 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the of the RECP projects results in the region</li> <li>36 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>36 brochures about the RECPC were distributed</li> </ul>
<b>29. Eco-Forum</b> "Water and Energy. ECO Forum Lviv", <b>Lviv</b> , October 7 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in the region
<b>30. Regional Economic Forum</b> "Green Economy and Green Solutions", <b>Dnipro</b> , October 7 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the RECP projects results in the region
31. Conference with the Leagues of Entrepreneurs and Industrialists (Degrachivska State Administration), Kharkiv, October 4 <sup>th</sup> , 2016	Participation in the Event	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>30 brochures about the RECPC were distributed</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
<b>32. International Conference</b> "Universities of Ukraine as subjects for anticorruption activity of the government", <b>Kyiv</b> , September 30 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the RECP projects results in the region
<b>33. Seminar</b> "CITIES of the FUTURE-H2020", <b>Istanbul</b> , September 30 <sup>th</sup> , 2016	Participation in the Event	<ul> <li>Awareness raising of the RECP projects results in Ukraine</li> <li>Searching for partners for new projects development</li> </ul>
<b>34. Seminar</b> "Energy saving technologies in the municipal sector", <b>Kyiv</b> , September 28 <sup>th</sup> , 2016	Organization of the Event	Awareness raising of the RECP projects results in the region
<b>35. Open seminar</b> "Nanotechnology for Sustainability and Energy in Modern Architecture" at the "KPI", <b>Kyiv</b> , September 23 <sup>rd</sup> , 2016	Participation in the Event	Awareness raising of the RECP projects results in Ukraine
<b>36. Conference</b> "Resource effective and cleaner production (RECP) at the industrial enterprises of the <b>Kharkiv</b> region", September 21 <sup>st</sup> , 2016	Organization of the Conference	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>36 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>36 brochures about the RECPC were distributed</li> </ul>
<b>37. Final Conference</b> on Horizon 2020 project "Ukraine", <b>Kyiv</b> , 21 September, 2016	Participation in the Event	<ul> <li>Awareness raising of the results of the RECP projects</li> <li>Searching for Partners for new projects development</li> </ul>
<b>38. Conference</b> "Resource-effective and cleaner production (RECP) at the industrial enterprises of the <b>Chernihiv</b> region", September 15 <sup>th</sup> , 2016	Organization of the Conference	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>35 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>35 brochures about the RECPC were distributed</li> </ul>
<b>39. Exhibition and Seminar</b> "Waste	Participation in the	Awareness raising of the results of the RECP projects

Topic	Type of activities	Results + positive impact to the project achieved
management-2016", <b>Kyiv</b> , September 13-14 <sup>th</sup> , 2016	Event	Searching for Partners for new projects development
40. Panel discussion "Energy efficient Ukraine: the role of youth" organized by WEF Global Shapers Kyiv Hub in cooperation with National Ecological Centre of Ukraine (NECU) and with support of Ukrainian Crisis Media Center UCMC, Kyiv, August 12 <sup>th</sup> , 2016		Awareness raising of the RECP project results
<b>41. Roundtable</b> "Prospects for increasing resource efficiency of the municipal facilities of the Tyvrovsky district", <b>Vinnytsya region,</b> July 29, 2016	Organization of the Event	<ul> <li>Awareness raising of the RECP projects results in the region</li> <li>38 participants (representatives from industries, government, NGOs, donors, financial organizations)</li> <li>38 brochures about the RECPC were distributed</li> </ul>
<b>42. Conference</b> "Resource Efficient and Cleaner Production (RECP) at the Industrial Enterprises of Kharkiv region", <b>Kharkiv</b> , 21 July, 2016	Organization of the Conference	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>24 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises - participants of the RECP project with RECP certificates (15 certificates on EaP Green project)</li> </ul>
<b>43. Conference</b> "Resource Efficient and Cleaner Production (RECP) at the Industrial Enterprises of Chernihiv region", <b>Chernihiv</b> , July 15th, 2016	Organization of the Conference	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>30 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises - participants with RECP certificates (10 certificates on EaP Green project)</li> </ul>
<b>44. Conference and Trainee Awarding ceremony</b> "RECP Implementation" (Kyiv	Organization of the Event	Awareness raising of the results of the RECP projects in the region

Topic	Type of activities	Results + positive impact to the project achieved
region), <b>Kyiv,</b> July 12, 2016		<ul> <li>20 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises - participants with RECPC diplomas (15 diplomas)</li> </ul>
<b>45. Workshop</b> on Communication and Conflict, <b>Kyiv</b> , June 23 <sup>rd</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>46. Information Day</b> of the Horizon 2020 at the "KPI", <b>Kyiv</b> , June 23 <sup>rd</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>47. Networking meeting</b> European Business Association (EBA) and Norwegian – Ukrainian Chamber of Commerce, <b>Kyiv</b> , June 16 <sup>th</sup> , 2016	Participation in the meeting	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>100 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
<b>48. Conference</b> as a result of the demonstration component of the project "Program to promote green modernization of Ukrainian economy of German international cooperation office (GIZ) GmbH" of Dnipropetrovsk region, <b>Dnipro</b> , June 15 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>43 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>32 brochures about the RECPC were distributed</li> <li>Awarding enterprises - participants with RECP certificates</li> </ul>
<b>49.The 6th Forum</b> "Resource Efficient and Cleaner Production (RECP): Efficient Use of Materials", <b>Lviv</b> , June 14 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>34 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
<b>50. RECPnet EECCA Regional Chapter Meeting, Batumi,</b> Georgia, June 9-10 <sup>th</sup> , 2016	Participation in the Meeting	Awareness raising of the results of the RECP projects in the region
<b>51. Information Seminar</b> "Basics of the RECP methodology: perspectives of increasing of resource efficiency in the region", <b>Vinnytsia</b> ,	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>25 participants (representatives from industry, government, NGOs)</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
June 9 <sup>th</sup> , 2016		
<b>52. Regular meeting</b> of Members of the Union of Entrepreneurs of Small, Middle-Sized and Privatized Enterprises, <b>Kyiv</b> , June 9 <sup>th</sup> , 2016	Participation in the event	Awareness raising of the results of the RECP projects in the region
53. Final Conference of the I stage of the project "UKRAINE-NORWAY" "Professional retraining of transfer to the military personnel reserve of the Armed Forces of Ukraine and other law enforcement agencies, members of their families and employment assistance", <b>Kyiv</b> , June 7 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>43 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>47 brochures about the RECPC were distributed</li> <li>Awarding enterprises - participants with RECP certificates upon completion</li> </ul>
54. Second Scientific - Practical Symposium "Norwegian-Ukrainian Cooperation: Education, Research And Business", Mykolaiv, June 1-4 <sup>th</sup> , 2016	Participation in the Symposium	<ul> <li>Awareness raising of the results of the RECP project</li> <li>50 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>15 brochures about the RECPC were distributed</li> </ul>
55. III International Scientific-Technical, Methodological Conference "Problems of Energy Management System – PEMS'16", Kyiv, May 31 <sup>st</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP project
<b>56.Training conference</b> "Energy Day in Chernivtsi", <b>Chernivtsi</b> , May 25 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>37 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>37 brochures about the RECPC were distributed</li> </ul>
<b>57. Seminar</b> "Energy Efficiency for Municipalities", <b>Lviv</b> , May 24 <sup>th</sup> , 2016	Organization of the Event	Awareness raising of the results of the RECP projects in the region

Topic	Type of activities	Results + positive impact to the project achieved
		<ul> <li>77 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>100 brochures about the RECPC were distributed</li> </ul>
<b>58. Second Energy Efficiency Partnership Forum</b> "Energy Services: investments in energy efficiency in the public sector and benefits for residential buildings", <b>Kyiv</b> , May 12 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>59. Steering Committee Meeting</b> on the Project "Promoting the adaptation and adoption of RECP (resource efficient and cleaner production) through the establishment and operation of a Cleaner Production Centre (CPC) in Ukraine", <b>Kyiv</b> , May 11 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Presentation of the LLC concept</li> <li>25 Participants (representatives of the Board of Steering Committee, Main Stakeholders, RECPC experts)</li> </ul>
<b>60. Workshop</b> "Essential viewing" for Horizon 2020 successful implementation, <b>Kyiv</b> , May 6 <sup>th</sup> , 2016	Participation in the Workshop	Awareness raising of the results of the RECP projects
<b>61. Discussion</b> "Minimization of sexism and negative gender stereotypes in media" in the National Democratic Institute (NDI), <b>Kyiv</b> , April 27, 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>62. Roundtable</b> "Energy subsidies and reforms", <b>Kyiv</b> , April 25, 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>63. The 5th Forum</b> "Resource Efficient and Cleaner Production (RECP): Reduction and Control of Air Emissions", <b>Kyiv</b> , April 22 <sup>nd</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>37 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
<b>64. Exhibition</b> "GREENEXPO - Alternative	Attendance	Awareness raising of the results of the RECP projects

Topic	Type of activities	Results + positive impact to the project achieved
Energy", <b>Kyiv</b> , April 19-22 <sup>nd</sup> , 2016		
<b>65. National exhibition-forum</b> "Independent Power System", <b>Kyiv</b> , April 19-22 <sup>nd</sup> , 2016	Participation in the Forum	Awareness raising of the results of the RECP projects
<b>66. Anti-crisis board meeting</b> at the Ukrainian Chamber of Commerce and Industry, <b>Kyiv</b> , April 20 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP projects
67. "Denmark-Ukraine Business Forum", Kyiv, April 19 <sup>th</sup> , 2016	Participation in the Forum	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>10 brochures about the RECPC were distributed</li> </ul>
<b>68. Training</b> "Overview Seminar EaP GREEN", <b>Kyiv</b> , April 18 <sup>th</sup> , 2016	Organization of the Event	Awareness raising of the results of the RECP projects
<b>69. Donor coordination meeting</b> on Environment and Climate at the Embassy of Sweden, <b>Kyiv</b> , April 15 <sup>th</sup> , 2016	Participation in the Meeting	Awareness raising of the results of the RECP projects
<b>70. The 4th Forum</b> "Resource Efficient and Cleaner Production (RECP): Reduction and Treatment of Waste Water", <b>Kyiv</b> , March 29 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>50 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
<b>71. Exhibition-forum</b> "Energy sphere", <b>Odessa,</b> March 24 <sup>th</sup> , 2016	Participation in the Exhibition; organization of the Seminar	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>19 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>29 brochures about the RECPC were distributed</li> </ul>
<b>72. Forum</b> "Ukrainian Business Forum", <b>Kyiv</b> , March 18 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the results of the RECP projects
<b>73. IX Interregional Exhibition</b> "Energy use and Energy Conservation", <b>Vinnytsia</b> , March 16-18 <sup>th</sup> , 2016	Participation in the Exhibition	Awareness raising of the results of the RECP projects

Topic	Type of activities	Results + positive impact to the project achieved
<b>74. Twinning project</b> "Institutional Twinning instrument in the European Neighbourhood Policy (ENP) region", March 15 <sup>th</sup> , 2016	Participation in the Event	Awareness raising of the results of the RECP projects
<b>75. Forum</b> "VI International Scientific-Practical Forum of Environment and Energy Efficiency in construction", <b>Kyiv</b> , March 3-5 <sup>th</sup> , 2016	Participation in the Forum	Awareness raising of the results of the RECP projects in the region
<b>76. Exhibition</b> "KyivBuild", <b>Kyiv</b> , March 3-4 <sup>th</sup> , 2016	Participation in the Exhibition	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>50 brochures about the RECPC were distributed</li> </ul>
<b>77. Conference</b> organized by the ULIE "Energy Efficiency and Renewable power generation: plans and initiatives as of 2016", <b>Kyiv</b> , March 1 <sup>st</sup> , 2016	Participation in the Conference	Awareness raising of the results of the RECP project
<b>78. Event</b> "Promoting energy efficiency in Ukraine: the best practices from Slovakia", <b>Lviv</b> , February 26, 2016	Participation in the Event	<ul> <li>Awareness raising of the results of the RECP project</li> <li>25 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
<b>79. Roundtable</b> "Visegrad 4 Ukraine: improving energy efficiency", <b>Lviv</b> , February 25, 2016	Participation in the Roundtable	<ul> <li>Awareness raising of the results of the RECP project</li> <li>200 participants (representatives from industry, governments, NGOs, donors, financial organizations)</li> <li>10 brochures about the RECPC were distributed</li> </ul>
<b>80. Forum</b> "Energy saving", <b>Lviv</b> , February 24 <sup>th</sup> , 2016	Participation in the Forum with a presentation	<ul> <li>Awareness raising of the results of the RECP project</li> <li>58 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>30 brochures about the RECPC were distributed</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
<b>81.</b> Workshop "Gender Workshop", <b>Kyiv</b> , February 24, 2016	Participation in the Workshop	Awareness raising of the results of the RECP project
<b>82. Scientific-Practical Conference</b> "Energy Future", <b>Kyiv</b> , February 24 <sup>th</sup> , 2016	Participation in the Conference	Awareness raising of the results of the RECP project
<b>83. Conference</b> "Resource efficient and cleaner production (RECP) at the industrial enterprises of the <b>Chernihiv</b> region", February 17 <sup>th</sup> , 2016 and Award Ceremony for the EaP Green project	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>30 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises - participants with RECP certificates (17 companies have received the certificates on the EaP Green project)</li> </ul>
<b>84. The 3th Forum</b> "Resource Efficient and Cleaner Production (RECP): Reduction and Control of Air Emissions", <b>Kyiv</b> , February 16 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>Awareness raising of the results of the RECP projects in the region</li> <li>46 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> </ul>
85. Steering Committee Meeting of the Project "Promoting the adaptation and adoption of RECP (resource efficient and cleaner production) through the establishment and operation of a Cleaner Production Centre (CPC) in Ukraine", <b>Kyiv</b> , February 9 <sup>th</sup> , 2016	Organization of the Event	20 participants discussed the RECP implementation results during 2015 in Ukraine
<b>86. Conference</b> "Resource efficient and cleaner production (RECP) at the industrial enterprises of the Kharkiv region", <b>Kharkiv</b> , February 4 <sup>th</sup> , 2016	Organization of the Event	<ul> <li>44 participants (representatives from industry, government, NGOs, donors, financial organizations)</li> <li>Awarding enterprises - participants with RECP certificates (15 certificates for the EaP Green trainees)</li> </ul>

Topic	Type of activities	Results + positive impact to the project achieved
87. Advisory Board meeting of the project	Organization of the	• 38 participants discussed the RECP implementation in Ukraine
"Promoting the adaptation and adoption of	Event	
RECP (Resource Efficient and Cleaner		
Production) through the establishment and		
operation of a Cleaner Production Centre		
(CPC) in Ukraine", <b>Kyiv</b> , January 21 <sup>st</sup> , 2016		
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Впровадження низьковитратних заходів	"Implementation of the low-cost options"	For All	1000	900

Poster  Application of the post of the pos	assessment of efficiency of the manufacturing resources usage at the companies"	For Enterprises and SMEs	100	50
Methodological Materials  Annual of the dear and a second of the second	instrument of the Cleaner Production	For Enterprises and SMEs, intern and specialists of the RECP Centre Experts and Enterprises	100	50
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Brochure	"Assessment of the	1000	500
PECYPCOE DENTIFICATION IN LINE PROPERTY OF THE	Resource Efficiency at the Companies"		

## **ANNEX 8. NEW PROJECT APPLICATIONS**

Project Name	Funding source of the Project	Current status, when/who – partner?	Results/future steps	Deadline	Responsible person
Greening Ukrainian Tourism	UNEP 10 YFP Programme	Application Form sent to the UNEP 10 YFP Programme Secretariat;  Application form to become a Partner of 10 YFP prepared and sent on April 28th, 2016	Call for proposals on the Sustainable Tourism Programme has not been selected for receiving the funds / application for 10 YFP Partnership got no answer.	First deadline: October 16 <sup>th</sup> , 2015 Second deadline: April 28 <sup>th</sup> , 2016	Oleksandra Kolmogortseva
Small Amount Revolving Fund for RECP low and middle-cost demonstration projects' implementation	Local Cooperation Fund, Embassy of Finland in Ukraine	Application Form sent to the Project Committee	Did not received an answer. Additional letter sent in April.	January 31st, 2016	Oleksandra Kolmogortseva
Knowledge Transfer and consulting support on RECP Implementation for Bosnia and Herzegovina RECP Centre	The Regional Mobility Fund	Application Form sent to the Regional Mobility Fund	The Proposal was rejected in June 2016	March 31 <sup>st</sup> , 2016	Oleksandra Kolmogortseva
Chernivtsi District Heating Project – Project Implementation Support	EBRD	Expressions of Interest sent to the Project Committee	RECPC has not been short listed for this assignment (received e-letter, July 2016)	April 1 <sup>st</sup> , 2016	Oleksandra Kolmogortseva
Sustainable Innovation for Ukrainian Industry	Swedish Institute	Application Form sent to the Project Committee	RECPC has not been short listed for this assignment	April 15 <sup>th</sup> , 2016	Oleksandra Kolmogortseva
FINTECC TC Programme in Ukraine: Project Manager for the Innovation Vouchers Scheme	EU Neighbourhood Investment Facility (NIF)	RECPC is a consortium member, Partner (lead company) – "Ambiente Italia"	Expression of Interest have been submitted Evaluation process is ongoing	June 29 <sup>th</sup> , 2016	Evgen Novakivskyi
Interreg Danube Transnational Programme	European Commission	The application form has been prepared and sent to consortium Partners	Evaluation process is ongoing	August 10 <sup>th</sup> , 2016	Igor Shylovych
EU4Business	European	The Project is ongoing in	The application form is	August 26 <sup>th</sup> ,	Taras Sakalosh

	Commission	Ukraine. The Centre submitted an application form to become a Business Support Centre in 6 regions of Ukraine.	under consideration	2016	
Blue Technology – transfer of innovative solutions to sea basin economies	European Commission EASME	The Consortia for the Project Proposal was not ready for Application submission; Partner search was ongoing too long	To enhance communication with Partners (RECP net members from the Black Sea basin) for the future Proposal preparation	September 30 <sup>th</sup> , 2016	Oleksandra Kolmogortseva
Development of activity-specific monitoring methodologies related to installations	World bank	The application form has been prepared and sent to consortium Partners	The application form is under consideration	November 3 <sup>rd</sup> , 2016	Oleksandra Kolmogortseva
Promoting the adaptation and saving the natural resources within the river Bug basin	ENI Cross-border Cooperation Programme Poland- Belarus-Ukraine 2014-2020	Project Proposal form is under preparation	Letter of support received from Lviv oblast state administration	December 31st, 2016	Tetyana Knyazkova
Promoting of the career development of the women in industry and business	N/A	Project Concept has been prepared	Searching for Call for Proposal and Funding, Communication with Partners for Project Concept finalization Partner in Poland - Her Story Foundation, Partner in Ukraine - Consulting agency "Personal"	N/A Searching for Call	Svitlana Chunikhina

