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Independent final evaluation

National Cleaner Production Programme
– Republic of Moldova

UNIDO project number: UE/MOL/11/002
SAP ID 104143



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO OFFICE FOR INDEPENDENT EVALUATION

Independent final evaluation

National Cleaner Production Programme
– Republic of Moldova

UNIDO project No. UE/MOL/11/002 – SAP ID 104143



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The views and opinions outlined in this report do not necessarily reflect the views of the Government of Austria, the Republic of Moldova, or UNIDO.

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The evaluation team hopes that the findings, conclusions and recommendations will contribute to the successful finalization of the current Project, formulation of a potential next phase and to the continuous improvement of similar projects in other countries.

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Abbreviations and acronyms

ADA	Austrian development agency
AF	Advisory forum
BAT	Best available technique
BEP	Best environmental practice
BMEIA	Federal Ministry for Europe, Integration and Foreign Affairs (Austria)
CP	Cleaner production
EaP GREEN	Project “The “Greening Economies in the Eastern Neighborhood”
EC	European Commission
EMS	Environmental management system
EST	Environmentally sound technologies
EU	European Union
GDP	Gross domestic product
GNI	Gross national income
HDI	Human development index
ISID	Inclusive and sustainable industrial development
MDG	Millennium development goal(s)
NCPC	National Cleaner Production Centre
NCPP-Moldova	National Cleaner Production Programme in the Republic of Moldova
NEB	National executive board
NGO	Non-governmental organization
NPO	Non-for-profit organization
RECP	Resource efficient and cleaner production
SCP	Sustainable consumption and production
SME(s)	Small and medium enterprise(s)
TUM	Technical University of Moldova
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization

Glossary of evaluation related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development objectives of an intervention were or are expected to be achieved.
Efficiency	A measure of how economically inputs (finances and other resources) are converted (through activities) into outputs.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Intervention	An external action to assist a national effort to achieve specific development goals.
Lessons learned	Generalizations based on evaluation experiences that abstract from specific to broader circumstances.
Log frame (logical framework approach)	Management tool used to guide the planning, implementation and evaluation of an intervention. System based on MBO (management by objectives) also called RBM (results based management) principles.
Outcomes	The achieved or likely effects of an intervention's outputs.
Outputs	The products in terms of physical and human capacities that result from an intervention.
Relevance	The extent to which the objectives of an intervention are consistent with the requirements of the end-users, government and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive summary

Background, purpose and methodology of this evaluation

This report covers the independent final evaluation of the project - National Cleaner Production Programme – Republic of Moldova” (UNIDO SAP ID: 104143) (“the Project” and “NCPM-Moldova”), commissioned by UNIDO and conducted by two external evaluators: Dr. Dick van Beers, International Evaluator, and Mr. Serghei Ostaf, National Evaluator, (“the evaluators”).

The objectives of the evaluation are: to assess the performance of the Project; to ascertain the continued relevance of Resource Efficient and Cleaner Production (RECP) for Moldovan businesses and other organizations; and to provide lessons learnt and potential recommendations.

The three-year project was formally approved in June 2011 and implementation commenced after confirmation of funding from the Government of Austria in September 2011. The approved Project budget was € 500,000. A zero-cost one year extension was agreed in October 2014, with a view to complete the project by 30 September 2015. By end of June 2015, about 94% of total budget had been committed.

The objective of the Project was to improve the resource efficiency and environmental performance of businesses and other organizations, in particular small and medium enterprises in the food processing, construction materials’ and municipal services’ sectors, through the implementation of methods, practices and policies.

Key findings

Based on the assessment discussed and presented in this evaluation report (Chapters 5 to 6), the key findings are summarized below. The detailed and full set of findings are included Chapter 7 of this report.

NCPM-Moldova delivers value-adding RECP services to enterprises, government organizations and society. Private sector companies and public institutions involved in the Project show significant recognition of NCPM-Moldova. A substantial community of technical RECP experts has been created and is active in RECP promotion in three regions.

Substantial environmental savings have been identified and implemented as a result of the project. Annual environmental savings from the implementation monitoring in 7 companies and 25 club members are estimated at 3,015,000 kWh, 148,000m³ water, and 52.3 tons of materials. Furthermore, 24 RECP assessments carried out with public institutions identified over annual electricity savings of up to 21,000,000 kWh and 4,400kt of CO₂ savings. The monitored economic savings from implemented measures are estimated at € 290,000 annually (estimated to be over € 870,000 over past 3 years). A representative and extensive sample of savings at the beneficiary companies were verified through a quality check of 10 RECP assessment reports, site visits to 6 companies and public institutions participating in the project, quality and consistency review of Excel spreadsheets with accumulative project results and interviews with Project beneficiaries, project team members and RECP Club Coordinators.

Current monitoring of RECP implementation does not cover yet all participating organizations, so economic and environmental savings are higher than reported above. 8 detailed RECP assessments are ongoing and 46 enterprises are part of the

second/third cycle of RECP Clubs in Causeni, and Ungheni Municipalities. As a spin off from the Project two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises and the RECP club model is replicated to five countries under EaP GREEN.

Given the total project budget of € 500,000, the savings achieved through the Project show a substantial return on investment, also taken into account that the Project delivered a range of other RECP services and promotions. The sustainability of these actions are discussed in Section 5.5 and Chapter 9 of this evaluation report.

In addition to technical capacity building, there is a need to further build capacity of the established pool of RECP experts on management consulting, including and setting up their own consultancy businesses and advising organizations on access to finance. From the RECP assessment reports produced by the Project and communications with the enterprises it is clear that more of the identified environmental and economic savings can be achieved if support is provided to access available financing and funding schemes (which may have more favorable interest ratings and lending conditions). There seems substantial market demand and potential for the delivery of a full RECP package of technical and management solutions through new business ventures.

Although overall policy implementation in the country is a challenge, progress towards mainstreaming RECP concepts through policy instruments has been made. The industry-to-regulation/policy approach applied (the established RECP Club model) as part of NCPP-Moldova has been proven to be successful. These clubs are built upon several success factors for replication, including the involvement of regional communities, creation of so-called “industry champions”, trust building between local stakeholders, hands-on information sharing and problem solving, and creating platforms for tackling collective opportunities and challenges in the regions. From the interviews held with project stakeholders as part of this evaluation (Annex F) and minutes from meetings of the National Executive Board (March and June 2015), there is emerging consensus that a separate National RECP Strategy is not supported by key stakeholders. However, the most effective RECP policy instruments to be implemented in the country are still under discussion. Key stakeholders still have to agree on the most effective top-down RECP policy instruments in country. One of the underpinning root-causes is that there is a capacity constraint at governmental institutions and at country level in general. More capacity building to decision makers and supporting RECP experts on developing and integrating RECP policies and their implementation in Moldova is therefore required. This complex policy topic and how it was addressed as part of the NCPP-Moldova is further discussed in Chapter 5 of this evaluation report.

The results achieved at company and public institution level are likely to be sustainable. The sustainability of the broader project outcomes will depend on the institutionalization of RECP related activities in the country, including the completion of a long term plan for the RECP service provision. There is a need for further institutionalizing the Project outcomes with other RECP related initiatives and programs in the country and internationally. Although the set-up arrangement and operation of the National Executive Board was successful, capacity constraints, decision makers’ cultural and country context issues remain. The NEB played a key role in the successful guidance and implementation of the Project, and starting the process to institutionalize RECP in the country. The evaluators note the importance to complete the assessment of most appropriate long term plan for NCPP-Moldova, and the required institutional set up and legal entity and supporting business and

operational plans. This task is currently being undertaken by contracted experts in the period July to September 2015.

The important “enabling role” and key strengths of the NCPP-Moldova should be recognized and this should be the basis for stakeholder discussions on the future work of the NCPP in the country and the region. The key strengths of the NCPP-Moldova are on providing a leading role on industry-to-regulation/policy (“bottom-up”) approaches in the country, including capacity building, demonstration of RECP improvements in enterprises/public institutions, and facilitating multi-stakeholder engagement. It is the view of the evaluators that the responsibility for the development and integration of RECP related policies and strategies should lie with the relevant government authorities. The NCPP-Moldova should provide a fostering role in this process (e.g. facilitate, pilot and support). In order for the government to take a leading role in the development and integration of RECP related policies more capacity building to policy makers and their experts is required on developing and integrating RECP policies and their implementation.

Overall rating and conclusion

The table below provides the overall ratings made by the evaluators for the criteria assessed in this evaluation report.

Evaluated aspects	Cross-reference in this report	Highly satisfactory	Satisfactory	Not satisfactory
Project formulation	Section 5.1	X	X	
Ownership and relevance	Section 0		X	
Efficiency of implementation	Section 5.3	X	X	
Effectiveness	Section 5.4	X	X	
Impact and sustainability	Section 5.5		X	
Project coordination and management	Section 5.6		X	
Other (gender mainstreaming and procurement)	Section 5.7		X	
Assessment against log frame	Section 6.1	X	X	
Key success factors for providers of services in resource efficient and cleaner production UNEP/UNIDO, 2010) ¹	Section 6.2		X	
Overall rating	Whole report	X	X	

The overall conclusion is the NCPP-Moldova is providing unique and added value services to private sector companies and public institutions in reducing resource use, wastes and pollution. The RECP policy related outputs have played a complementary and fostering role at the national level.

¹ Good Organization, Management and Governance Practices: a primer for providers of services in resource efficient and cleaner production, UNIDO/UNEP, Vienna/Paris, Austria/France (2010).

The Project demonstrates **satisfactory to highly satisfactory performance** against the Project's logical framework. In the view of the evaluators, the work of the NCPP-Moldova **should be continued** with key stakeholders in industry, government, and NGOs through a next phase.

Key recommendations

Based on the findings of this evaluation, the key recommendations are summarized below. The detailed and full set of recommendations is presented in Chapter 8.

Key recommendations to UNIDO

- UNIDO to re-focus its efforts on institutionalizing and synergizing RECP activities in the country, including the completion of a long term actionable plan for the RECP service provision in the country and restructuring the current draft of RECP policy roadmap being developed through the Project as an action oriented document rather than a regulatory document.
- UNIDO to further develop NCPP-Moldova as an “enabler” for the implementation and scaling up of RECP in the country, meaning a leading role on RECP capacity building and demonstration, and fostering role (e.g. facilitate, pilots, support) in the development, integration and implementation of RECP related policy instruments at the national level.
- UNIDO to expand capacity building to (1) government decision makers and supporting policy experts on RECP policy implementation and integration, and (2) technical RECP experts to deliver extended package of RECP services to companies and public institutions (including access to finance and management consulting).

Key recommendations to government and counterpart organizations

- Key government, industry and society stakeholders (e.g. Ministry of Environment, Ministry of Economy, Ministry of Agriculture and Food Industry, local governments, environmental and economic focused NGOs, international companies operating in Moldova) to adopt the renewed National Declaration on RECP Promotion coordinated through NCPP-Moldova.
- Rather than developing a separate and new National RECP Strategy, it is recommended that government agencies in Moldova incorporate relevant RECP concepts into already existing policy instruments and ensure their implementation. Throughout the duration of the Project, this integration process has already started by the Ministry of Environment incorporating the RECP concept into the National Environmental Management Strategy. The successful RECP Club Model (as the industry-to-regulation/policy approach applied as part of NCPP-Moldova) should be considered for integration into existing policies.
- Ministry of Environment, Ministry of Economy, Chamber of Commerce and Industry, Academy of Sciences, current member companies, and Austrian Development Agency to continue the National Executive Board (NEB) after the Project.

Key recommendations to donor

- Austria (through its Ministry for Europe, Integration and Foreign Affairs, BMEIA) to consider continuing the support to the NCPP-Moldova as part of a potential next phase with key stakeholders in industry, government, and NGOs.

Focus of potential next phase

The following focus areas and enabling functions are suggested for a potential next phase of the NCPP-Moldova (further details are provided in chapter 9):

- a) Institutionalize RECP service provision in a legal entity.
- b) Facilitate multi-stakeholder engagement towards institutionalization of RECP related policies in the country.
- c) Continue practical support to RECP implementation through the established RECP clubs, and support their replication to other regions in the country and internationally.
- d) Expand capacity building to (1) government decision makers and supporting policy experts, (2) RECP experts to deliver extended package of RECP services to companies and public institutions (including access to finance and management consulting), and (3) curriculum of engineering, and other educational training courses/programmes.
- e) Support the incubation of new consultancies offering a portfolio of RECP services to private and public clients.
- f) Continue the monitoring of RECP implementation in companies and public institutions and disseminate RECP achievements and success stories.
- g) Assist stakeholders to create synergies with parallel RECP related initiatives nationally and internationally.

It is noted that the continuation of the EaP Green Program until December 2016 provides de facto for a lean next phase of the present project and/or transitional phase towards a full scale dedicated RECP project in Moldova.

Lessons learnt

Lessons learnt for the wider applicability beyond the evaluated project are summarized below. A full and detailed overview of lessons learnt is provided in chapter 10.

- **RECP enabling role:** It is important to recognize where RECP service providers can play a leading, piloting, facilitating or contributing role. The key responsibility for developing and integrating RECP related policies and strategies should lie with the relevant government authorities.
- **RECP Clubs as replication model:** The establishment of RECP Clubs has proven to be a very successful concept to support the implementation and scaling up of RECP in Moldova. These clubs are built upon several success factors for replication, including involvement of regional communities, creation of so-called “industry champions”, and trust building between local stakeholders.
- **Full package of RECP services to beneficiaries:** Companies and public institutions need RECP services providers which can offer an extended - full package of RECP services, including management consulting to improve the business skills and access-to-finance solutions.
- **The importance of multi-stakeholder engagement:** Multi-stakeholder engagement processes are generally challenging and time consuming, yet are key to the long-term success and sustainability of RECP initiatives in any country. These multi-stakeholder processes need to be planned strategically and need to occur at different levels (e.g. locally, nationally, and internationally) throughout the project.

1 Introduction

1.1 Project background and description

This independent final evaluation covers the project National Cleaner Production Programme – Republic of Moldova (UNIDO project No. UE/MOL/11/002 – SAP 104143) (“the Project”), conducted by two external evaluators: Mr. Dick van Beers, International evaluator and Mr. Serghei Ostaf, National evaluator, (“the evaluators”).

RECP is briefly described in Box 1.

Box 1: Resource efficient and cleaner production (RECP) briefly explained

RECP aims at changing processes, products and services to increase efficiency and reduce risks to humans and the environment. Those changes combine:

1. **Good housekeeping:** prevents leaks and spills and aims to achieve proper, standardized operation and maintenance procedures and practices.
2. **Input material change:** replacement of hazardous or non-renewable inputs by less hazardous or renewable materials or by materials with a longer service life-time.
3. **Improvement of process control:** modification of working procedures, machine operation and process record keeping. The objective is to operate processes at higher efficiency and with lower rates of waste and emission generation.
4. **Equipment modification:** modification of the production equipment that lead to higher efficiency and lower rates of waste and emission generation.
5. **Technology change:** replacement of the technology, processing sequence and/or synthesis pathway in order to minimize the rates of waste and emission generation during production.
6. **On-Site recovery/reuse:** reuse of the wasted materials in the same process or for another useful application within the company.
7. **Production of useful by-products:** transformation of previously discarded wastes into materials that can be reused or recycled for another application outside the company.
8. **Product modification:** modification of product characteristics in order to minimize the environmental impacts of the product during or after its use (disposal) or to minimize the environmental impacts of its production.

Source: UNIDO

UNIDO is the specialized intergovernmental organization that supports Inclusive and Sustainable Industrial Development (ISID) in developing and transition countries. Its areas of intervention are industrial resource efficiency and sustainable production, trade capacity building and productive capacity building. Resource Efficient and Cleaner Production (RECP) is an exemplary intervention area aimed at mobilizing enterprises, in particular small and medium sized enterprises (SMEs) from the manufacturing and related productive sectors to ‘green’ their operations and become more efficient in the use of natural resources (materials, energy and water) and less polluting (in terms of waste water, waste and emissions).

RECP applies preventive environmental management techniques and total productivity practices with the triple aim of improving the efficient use of natural resources (materials, energy and water), minimizing the generation of wastes and emissions, and reducing the risks of industrial operations to workers, consumers and communities.

Experiences from thousands of enterprises globally representing all key manufacturing and related productive sectors have demonstrated that adopting RECP can be good for business, environment and climate, and ultimately development at large².

With funding support from the Government of Austria (through its Ministry for Europe, Integration and Foreign Affairs, BMEIA), UNIDO implemented the Project entitled – National Cleaner Production Programme (NCPP) – Republic of Moldova. The Project was implemented within the framework of the joint global RECP programme with the United Nations Environment Programme (UNEP) for developing and transition countries, which builds upon the achievements, experiences and lessons learned by both organizations with establishing and supporting National Cleaner Production Centres (NCPCs) globally since 1994 (www.unido.org/cp).

1.2 Project summary

The Project was designed during 2010-2011 on the basis of the achievements, experiences and lessons learned during the implementation of a (pilot) National Cleaner Production Programme (NCPP) in the Republic of Moldova, between 2009 and 2010, implemented with seed funding support from the Government of Czech Republic using the Technical University of Moldova (TUM) as national counterpart. Resource Efficient and Cleaner Production (RECP) assessments were completed in 5 companies from Chisinau, Orhei, and Riscani regions and 5 national experts were trained in conducting plant level assessments, whereas in addition several awareness and dissemination activities were undertaken.

Building on these pilot achievements, the Project was aimed to further advance the adaptation and adoption of RECP in the country, in particular in the food/agribusiness, construction materials and municipal services' sectors. The three-year Project was formally approved in June 2011 and implementation commenced upon release of the funding in September 2011. The approved Project budget is €500,000 (inclusive of programme support costs). A zero-cost one year project extension was agreed in October 2014, with a view to complete the project by 30 September 2015. The Project's logframe is included in Annex B of this evaluation report.

The objective of the Project was to improve the resource efficiency and environmental performance of businesses and other organizations, in particular small and medium enterprises in the targeted food processing, construction materials' and municipal services' sectors, through the implementation of RECP methods, practices and policies. The Project's activities have been structured under three outputs, respectively:

1. **RECP capacity:** improved capacity for and wide-spread utilization of RECP services that support adaptation and adoption of RECP methods, practices and technologies, through the creation of a cadre of at least 15 national RECP experts and supportive communication and awareness activities, including regional workshops, national conference and web-site.
2. **RECP demonstration:** increased implementation of RECP methods, practices and technologies by enterprises in the target sectors with monitoring and verification of the environment, resource use and economic benefits achieved. Using different approaches some 100 companies would have started

² See e.g.: Taking Stock and Moving Forward: the UNIDO-UNEP National Cleaner Production Centres, UNIDO, 2010.

implementation of RECP opportunities with documented economic, environmental and resource conservation benefits.

3. **RECP policy and strategy:** policy framework established and/or strengthened that enables the realization of RECP methods, practices and technologies in particular in the target sectors.

The Project operated under the direction of a National Executive Board (NEB), co-shared by the Ministry of Economy and Ministry of Environment and with due participation of the business sector and civil society (e.g. Chamber of Commerce and Industry, Academy of Sciences). The Project was hosted at the Technical University of Moldova (TUM).

1.3 Objectives and methodology of the evaluation

The evaluation was guided by the Terms of Reference (ToR) dated 16 March 2015 (Annex A), the revised UNIDO Evaluation Policy³, and the UNEG Evaluation Norms and Standards⁴. The ToR was operationalized through an inception report.

The field work was carried out in Chisinau and affiliated regional hubs (Ungheni and Causeni), Moldova, between 29 June and 3 July 2015 by two independent evaluators (“the evaluators”)⁵, appointed by UNIDO following a transparent selection process. The evaluators fulfilled the requirements of impartiality and independence⁶. The UNIDO Project Manager commissioned the evaluation. UNIDO’s Office for Independent Evaluation assured quality at the different stages of the process.

The final evaluation served the general purpose of monitoring programme achievements, relative to stated aims, activities and outputs at the start of the Project, determining observed impacts, identifying lessons learnt and providing suggestions for sustaining Project achievements upon completion.

The specific objectives of this final evaluation are:

- **To assess the performance of the project** (covering its implementation and management) in terms of efficiency, effectiveness, impact and sustainability, vis-à-vis the logical framework and organizational and institutional arrangements for its implementation and monitoring.
- **To ascertain the continued relevance of RECP for Moldovan businesses and other organizations**, taking into consideration the changed national socio-political and economic situation and other major initiatives of government and the international community.
- **To provide lessons learnt and potential recommendations** with a view to furthering the adaptation and adoption of RECP in Republic of Moldova, including institutionalization, service portfolio, outreach and advocacy.

³ Available from www.unido.org (last updated on 19 March 2015).

⁴ United Nations Evaluation Group (UNEG), Norms for Evaluations in the UN System, 29 April 2005.

⁵ Dr. Dick van Beers (Independent and International Sustainability Engineer, Germany) as the International Evaluator, and Mr. Serghei Ostaf (Independent Policy Consultant) as the National Evaluator.

⁶ This principle is underlined in paragraphs 48 of the UNIDO Evaluation Policy: “For independent evaluations, the members of an evaluation team must not have been directly responsible for the policy-setting, design or overall management of the subject of evaluation (nor expect to be so in the near future)”.

In doing so the dual purpose of the final evaluation is to account for the grant funding and other resources utilized by the Project and to document and systematize the experiences gained with the Project in particular with a view to scaling up and mainstreaming RECP in small and medium enterprises (SMEs).

1.4 Methodology and evaluative approach

This final evaluation covers all Project activities implemented since the Project's start, notionally from September 2011 – June 2015, covering all three output areas in a balanced manner (i.e. RECP Capacity, RECP Demonstration and RECP Policy).

The final evaluation focused on the following three cross-cutting impact dimensions, namely:

- **Institutionalization and Governance (of RECP service delivery):** progress in the institutionalization of the RECP service delivery, through formalization of the NCPP and/or otherwise, its management systems and business processes, and the active participation of representatives of government, business and civil society in setting direction for and monitoring of the RECP service provisions⁷.
- **Adoption (of RECP methods, practices and techniques):** the level of actual implementation of RECP methods, practices and techniques by final beneficiaries (enterprises in target regions and sectors) and the scale of economic, resource conservation and environmental benefits realized by them⁸, as well as RECP-relevant Project-enabled changes in government policy and/or strategy and in availability of technology and finance for enterprises.
- **Learning and domestication⁹:** progress in learning from RECP experiences and achievements in Moldova, and incorporation of lessons learned into activities and services of the NCPP and its activities, including, but not limited to: communications strategy and awareness raising activities; contents and structure of training; and types, methodology and approaches of RECP service delivery (to enterprises and government).

Methodological principles

The **core methodological principles** applied to this evaluation include:

- A particular emphasis on triangulation (cross-validation) of data sources and an assessment of plausibility of the results obtained.
- The application of deductive reasoning, i.e. base conclusions and recommendations on evaluation findings.

⁷ Taking into account international good practices, as for example documented in: UNIDO/UNEP (2010), Good Organization, Management and Governance Practices: a primer for providers of services in resource efficient and cleaner production, UNIDO/UNEP, Vienna/Paris, Austria/France.

⁸ Using where appropriate enterprise level RECP indicators, as documented in: UNIDO/UNEP (2010), Enterprise-Level Indicators for Resource Efficiency and Pollution Intensity: a primer for small and medium sized enterprises, UNIDO/UNEP, Vienna/Paris, Austria/France.

⁹ In this context, domestication is understood as the process of customizing and fine-tuning international RECP concepts, methods and practices to Moldova context and in particular the needs and opportunities experienced by target enterprises, with a view to make RECP more appropriate, attractive and affordable to those target enterprises and foster and catalyze their self interest in RECP adoption. Domestication is thereby a key enabler for scaling up and mainstreaming RECP in national context.

- Application of the basic principle of “realistic evaluation”, i.e. “intervention plus environment leads to results”. Factors external to UNIDO’s support that may have facilitated or impeded the achievement of the expected results are taken into account.
- The use of an iterative approach, meaning that evolving findings were taken into account and subsequently validated, as far as this is possible.
- Rather than driving the discussion through a predefined “protocol, the evaluators primarily facilitated an open discussion with the purpose of collecting as many different opinions and ideas as possible that might be of use for formulating well-funded, useful recommendations.

The evaluators’ assessment of whether UNIDO provided the right type of support in the right way through each of the expected results to achieve the Project objectives was based on set of **evaluation criteria**, including project formulation, ownership and relevance, efficiency of implementation, effectiveness, impact and sustainability, project management and coordination. The detailed evaluation criteria are outlined under “Scope of assessment” in Chapter 5 “Assessment against evaluation criteria”.

Data collection

Data was collected through desk study (see list of documents included in Annex D, in-depth discussions with all key stakeholders of the Project, both in the form of focal-groups and individually (see list of organizations and persons met enclosed in Annex F) and personal observation by the evaluators during field visits. The Project team members openly shared all relevant information and their viewpoints on the Project.

Preliminary findings

Preliminary findings were presented and discussed in detail with the members of the National Executive Board of the NCPP–Moldova on 3 July 2015. On 11 July, a first draft report was circulated to UNIDO in preparation of a physical de-briefing 6 August 2015 with the Project Manager, the Office for Independent Evaluation and the donor. Purpose of the de-briefing was a factual verification of key findings and an in-depth discussion of conclusions and recommendations. All factual corrections received prior and during a de-briefing meeting on date in Vienna were taken into account.

The NEB members endorsed the preliminary findings as presented on 3 July 2015, and have requested to receive the detailed final evaluation report. The full draft of the evaluation report was circulated to NEB members on 21 August. ADA provided comments on the draft report which have been considered and integrated into the final version of the report.

1.5 Limitations

Considering the Project’s scope and geographical coverage, the duration of the field mission (seven days), which also included field visits to beneficiary companies outside Chisinau, was relatively short. However, the evaluators note that a comprehensive evaluation was undertaken during the field mission, and that all key local and national stakeholders have been met and interviewed.

As part of the field mission the evaluators visited a sample of beneficiary companies in the food/agribusiness, construction materials’ and municipal services’ sectors. The visits provided an additional insight on the work of the NCPP-Moldova. A qualitative review of the RECP assessment reports produced for the participating companies indicate that the reported economic and environmental savings reflect the true situation. However, a detailed quantitative audit of all environmental and economic

savings was not undertaken as part of this evaluation. However, a representative and extensive sample of savings at the beneficiary companies were verified through a quality check of 10 RECP assessment reports, site visits to 6 companies and public institutions participating in the project, quality and consistency review of Excel spreadsheets with accumulative project results and interviews with Project beneficiaries, project team members and RECP Club Coordinators.

Taking into account these limitations, sufficient factual information for a well-founded evaluation against set evaluation criteria was available.

2 Country and project context

2.1 Country context

Landlocked between Romania and Ukraine, Moldova emerged for the first time in history as an independent Republic following the collapse of the USSR in 1991. The Republic of Moldova has surface area of 33,8 sq km, of which around 85% is arable for agricultural use. The Republic of Moldova is home to a population of 3.6 million inhabitants with a per capita Gross National Income (GNI) of USD 2 233 in 2012¹⁰.

The country ranks among the lowest in terms of Human Development Index among countries in the region¹¹, and is facing serious challenges in meeting the Millennium Development Goals (MDG), including in the areas of water, sanitation and energy¹². HDI value for 2012 is 0.660 (in the medium human development category) positioning the country at 113 out of 187 countries and territories. Between 1990 and 2012, Moldova HDI value increased from 0.65 to 0.660, an increase of 2 percent or average annual increase of about 0.1%. The country slipped from 99th to 113th place on the HDI ladder during the Project period.

After the severe contraction of the economy during the 1990s, growth in Gross Domestic Product (GDP) had been positive from 2000 to 2008, with average 6% from 2001 to 2005, while in 2006-7 slowed down to 3% and in 2009 contracted by 6% in the wake of the global financial crisis. After 2010, the growth reinstalled by average 4% till 2014. By 2005, over 80% of GDP had been privatized, with state-ownership continuing for large scale enterprises in a few cases only. Moldova remained the poorest country in Europe, with Gross National Income (GNI) of USD 2,550 per capita (in 2014 in current USD), a level below other countries in its immediate vicinity¹³.

The export of labor and resulting inflow of workers' remittances has come to dominate economic and social life of Moldovan citizens. In 2008, workers' remittances represented almost a third of the Gross Domestic Product (GDP), a figure that dropped to 22% in 2009. Workers' remittances were in 2012 nearly double the total Manufacturing Value Added (MVA) and triple the contribution of agriculture.

In 2011 life expectancy was 67 years for the male and 74 years for female population¹⁴. The incidence of poverty according to the international threshold of 4.3 dollars per day decreased from 34.5% in 2006 to 20.8% in 2012 (final target – 23.0%).

Overseas remittances have come to dominate the economy at large, and were in 2014 equal twice the contribution of industry and triple the contribution of agriculture. The once flourishing agriculture and agri-business sectors have dwarfed since

¹⁰ <https://data.un.org/CountryProfile.aspx?crName=Republic%20of%20Moldova>.

¹¹ Central and Eastern Europe and Central Asia.

¹² Human Development Report 2013, Explanatory Notes <http://hdr.undp.org/sites/default/files/Country-Profiles/MDA.pdf>, p2.

¹³ <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>.

¹⁴ <http://www.worldlifeexpectancy.com/country-health-profile/moldova>.

independence after the collapse of the Soviet Union. Further development challenges include the large foreign debt and high unemployment¹⁵.

The November 2014 election resulted in the vote of the continuation of the majority for the pro-European political parties that came to power as a result of 2010 parliamentary elections (PLDM, PDM and PL). However, the Government has been formed only in March 2015. The prime minister however declared resignation in June 2015, therefore currently there is interim prime-minister serving the position. June 2015 local elections produced an overall support for the pro-European choice for the PLDM, PDM and PL as well as newly formed PPME. The new Government has been voted in early August 2015 led by V. Strelt.

In interim and election periods the government can only perform the functions of the administration of the policies rather than to elaborate and adopt new ones. The instability influences heavily the stability of the administration and opens opportunities for the developments of various crises. A recent example in the financial and banking sector emerged in the late 2014 and beginning of 2015 when two private banks (BS and UB) as well as the state run bank BEM have been involved in the scandal of the toxic credits amounting to entire credit portfolio and the hostile takeover of the three of them. The Government rushed to save them by providing through the National Bank of Moldova a state guarantee amounting overall to 1 bln euro or 25% of GDP - decisions taken in secret in several turns in November 2014, March and May 2015 – all justified to save the deposits of the clients. The banking and financial crises is impacting seriously on the political situation in the country.

2.2. Positioning of the project in relation to other initiatives

An overview of project history and previous cooperation is provided in Annex C of this evaluation report. An overview of currently operating initiatives relevant to the Project are provided below.

Global RECP programme

In 1994, UNIDO launched jointly with UNEP the Cleaner Production Programme with the objective of increasing the competitiveness and productive capacity of industry, specifically Small and Medium Enterprises (SMEs), through implementation of CP and application, adaptation and diffusion of Environmentally Sound Technologies (www.unido.org/cp)¹⁷. The main modus of programme implementation was through the creation of National Cleaner Production Centres (NCPCs) and in some countries through National Cleaner Production Programmes ((NCPP). The NCPCs/NCPPs were initially established as project management units administered by UNIDO and/or UNEP. However, over time it was expected that these would become increasingly independent, both administratively as well as financially, through an appropriate national institutional and governance arrangement, either in one centralized agency

¹⁵

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:22759429~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html>.

¹⁶ Taking Stock and Moving Forward: the National Cleaner Production Centres, UNIDO/UNEP, 2010, www.unido.org/cp.

¹⁷ Taking Stock and Moving Forward: the National Cleaner Production Centres, UNIDO/UNEP, 2010, www.unido.org/cp.

(typical for a NCPC) or by coordinating the different inputs from various agencies (common for a NCPP). The Programme currently covers activities in over 55 countries in Africa, Asia, Latin America and Eastern European countries. Of special relevance was the experience in the region prior to launch of the NCPP in Moldova, particularly from Romania, Bulgaria, Ukraine, Czech Republic, Slovakia, Hungary, Croatia, Russian Federation, Albania, Macedonia, Serbia and Uzbekistan.

NCPCs/NPPs have provided substantial contributions to the promotion of more resource efficient and environmentally sound industrial production processes through diverse services, such as:

- **Awareness rising:** promoting the concept of CP and its benefits to business community (industrialists, industrial associations, consultants, government, the financial institutions, institutes of higher education, NGOs, etc.).
- **Information dissemination:** providing relevant information on CP and related topics to companies, governments and other interested parties.
- **Training:** building CP capacity, primarily in industry, but also in industry associations, government, research institutes, financial institutions, universities and consultants.
- **In-plant demonstrations:** These form an important element of technical training and awareness raising, showing successful CP applications in different industries.
- **Technical assistance:** assisting enterprises to identify and implement CP solutions and support them with implementation of Environmental Management Systems (EMS, including ISO 14001) as well as other CP-related approaches.
- **CP technology investments:** creating capacity for transferring CP technologies and promoting CP investments and financing thereof in particular in SMEs.
- **Policy advice:** assisting policy-makers to develop and implement policies, which promote voluntary engagement of industries on environmental performance improvements through implementation of CP programmes.

UNIDO and UNEP have extended the scope of their joint programme to Resource Efficient and Cleaner Production (RECP) to associate CP more profoundly with today's and tomorrow's most pressing environmental and resource use challenges, at the local, national and global scales.

In 2007/2008, in cooperation with UNEP and the Governments of Austria and Switzerland, UNIDO carried out an independent programme evaluation of this UNIDO-UNEP CP Programme. The evaluation uncovered a richness of experience and expertise and confirmed that good progress had been made in putting CP on the agenda of the public and private sectors, training technical staff, implementation of in particular low to intermediate technology options and policy change in some countries¹⁸.

¹⁸ Independent Evaluation of the UNIDO-UNEP Cleaner Production Programme, UNIDO, Vienna, 2008, http://www.unido.org/fileadmin/user_media/About_UNIDO/Evaluation/CP_Program_Evaluation_Report_May_2008.pdf.

Global RECP network (RECPnet)

RECPnet (<http://recpnet.org>) is the global network for promoting the widespread adaptation and adoption of Resource Efficient and Cleaner Production in developing and transition economies. As patron agencies, UNIDO and UNEP, provide support for RECPnet through their joint RECP Programme. RECPnet aims to enable and contribute to the effective and efficient development, application, adaptation and replication of RECP concepts, methods, policies, practices and technologies in developing and transition countries and to facilitate effective North-South and South-South collaboration and the transfer of RECP-relevant knowledge, experiences and technologies. RECPnet has been formalized by its Charter and became operational in November 2010 with 41 founding members. An elected executive committee has since guided the further development of RECPnet. NCPP Moldova was accepted as observer member of RECPnet in 2012.

NCPP-Moldova was implemented within the framework of the global joint UNIDO-UNEP RECP Programme for developing and transition countries. Under the umbrella of this global UNIDO-UNEP Programme, NCPP-Moldova was able to participate in and benefit from a range of programmatic activities, including for example international training, participation in meetings of the global network, accessing RECP resources (manuals, case studies, experts, etc.) and expertise and experience from other countries (through respective NCPCs and other RECP service providers that participate in the global network) and contributing to global programme level outputs and outcomes (for example flexible framework on RECP policy, technology and finance).

Millennium Development Goals (MDGs)

The UNIDO-UNEP RECP Programme supports the realization of the United Nations Millennium Declaration. Specific contributions of the global programme to Millennium Development Goals (MDGs) are:

- **MDG7:** Ensure Environmental Sustainability: The implementation of CP and related concepts, practices and technologies by businesses and other organizations will reduce their intensities of waste and pollution generation and of resource use, contributing to slowing down environmental degradation and un-sustainable use of natural resources.
- **MDG8:** Develop a Global Partnership for Development: The global programme is structured as a multi-pronged, multi-levelled intervention to motivate enterprises and other organizations to consider RECP and then providing these with the necessary services and resources to implement RECP. This will strengthen and/or create partnerships at several levels. At the global level, a network of NCPCs and other RECP Services Providers has been created, that develops and disseminates best practice methods and approaches for RECP implementation, with the support of UNIDO and UNEP. At the national, and potentially subnational and multi-country levels, the member RECP Services Providers will further strengthen their collaboration with relevant stakeholders, including the private sector, national, local and regional government.

Association agreement with the European Union

The Government of the Republic of Moldova signed in 2014 an Association Agreement with the European Union, which foresees a Deep and Comprehensive Free Trade Agreement (DCFTA). The Association Agreement is based on the 'more for more' principle, i.e. the EU will provide more support and more market access as Moldova

demonstrates more progress in implementing the terms of the Association agreement and its economic and related reforms.

EaP GREEN

In order to support a regional focus on greening of economies, the EU further supports a regional action on greening of economies in its Eastern Partnership Countries (Armenia, Azerbaijan, Belarus, Moldova and Ukraine), implemented by a consortium led by the Organization for Economic Cooperation and Development (OECD), with contributions from United Nations Economic Commission for Europe (UNECE), UNEP and UNIDO (EaP GREEN Programme, 2013-2016, see: <http://www.oecd.org/env/outreach/eapgreen.htm>).

The programme responds to commitments made by countries, the European Union and international partners in several international forums: the Warsaw Eastern Partnership Summit, the Seventh “Environment for Europe” Ministerial Conference, and the Rio+20 Summit.

2.3 Key changes over the project duration

The country’ socio-political and economic situation has remained volatile over the implementation period of the project as a result of both internal factors (weakened economic growth resulting from declining overseas remittances, exchange rate volatility and political change) and international developments in the region, including in particular the Ukraine crisis.

It was originally planned to complete the present phase of the NCPP-Moldova by 30 September 2014. Considering the status of the NCPP early 2014 the NEB meeting on 27 February 2014 recommended a (zero-cost) extension until 30 September 2015. The donor approval of extension occurred in October 2014.

2.4 Counterpart organizations

Ministry of economy

The previous Ministry of Industry was amalgamated in 2008 into the Ministry of Economy which is now tasked with ensuring the development of a sustainable economy by optimizing the framework for entrepreneurial activity, creating an attractive investment climate and fostering international economic cooperation. Its mandate is vested in the “Competitiveness Policies and Development of Small and Medium Enterprises”, with specific emphasis for encouraging the technological development of enterprises; developing the support infrastructure for enterprises; and ensuring favorable conditions for the development of a knowledge-driven economy.

Implementation of RECP methods and practices will contribute to the technological development of enterprises and other organizations, whilst the establishment of RECP service provision, through the NCPP-Moldova, is part of the support infrastructure for enterprises. The General Energy Security and Efficiency Directorate is the main Ministerial subdivision dealing with the relevant policies as well as Energy Efficiency Agency, Energy Efficiency Fund and State Energy Inspectorate¹⁹. The Energy Strategy of the Republic of Moldova refers to 2020 as the year of full integration in the EU internal energy market. In compliance with this objective, the national legislation will be aligned, in useful time, to the Energy Community’s acquis and will be convergent with the EU acquis, which will ensure the legal and regulatory compatibility with these

markets. In the context of energy sector development, the National Action Plan on Energy Efficiency for 2013-2015.

Ministry of environment

The Ministry of environment is the principal custodian for environment and natural resources in the Republic of Moldova. It is entrusted to develop, promote and implement state policies on environment and natural resources protection. It primarily ensures the integration of environmental requirements in economic process and sector policy reform. It also manages the National Environmental Fund and coordinates various local environmental funds. For 2011-2014, the government has prioritized for the environmental policy domain the provision of an adequate framework for environmental protection and sustainable use of natural resources and reduction of the negative impacts of businesses on environment, natural resources and population health. Improvements in the productivity of use of natural resources and reduction of the pollution and waste intensities of enterprises, as realized through implementation of RECP practices and technologies, is essential for achieving these objectives. The environmental fund is the mechanism for the allocation of the state subsidies towards the implementation of environmental objectives¹⁹.

Technical University of Moldova

Technical University of Moldova (TUM) is the only higher technical educational institution in the country, accredited by the state. TUM comprises 9 faculties: "Power and Electrical Engineering", "Mechanical and Industrial Engineering, Transportation", "Computers, Informatics and Microelectronics", "Engineering and Management in Electronics and Telecommunications", "Technology and Management in Food Industry", "Textile Industry", "Cadastre, Geodesy and Constructions", "Urbanism and Architecture", "Economic Engineering and Business". Within the Faculty of Engineering and Management in Machine Building there is the Technical College. The faculty of power and electrical engineering is the main training unit in the subject of energy efficiency²⁰.

Chamber of commerce and industry

The Chamber provides variety of services to the business community. Among those are: exhibitions and fairs and participation of the Moldovan companies, Arbitration court services, vocational training, helping the Moldovan business to enter in the contact with the foreign counterparts²¹.

Academy of sciences

The Academy of Sciences of Moldova (ASM), in its role of the highest scientific forum of the country, represents the only public institution of national interest in the sphere of science and innovation, is a plenipotentiary coordinator of scientific and innovation activity, scientific consultant of the public authorities and has an autonomous statute

¹⁹ <http://mediu.gov.md/index.php/en/>.

²⁰ <http://www.utm.md/en>.

²¹ <http://chamber.md/>.

and acts on the basis of self-administration principles. Institute of power engineering of the Academy of Science is the core partner to the energy efficiency research²².

INQUA

INQUA-Moldova' – is a non-governmental and non-profit public organization and is one of the oldest public organizations in the Republic of Moldova. Founded in 1986, 'INQUA-Moldova' was registered as a public ecological organization. The organization is a leader in innovative environmental researches and programs and is widely known in the Republic of Moldova and abroad as a community of high professional (international) experts and specialists who are able to conduct projects with a high degree of complexity. The organization works in the areas of waste management and energy: to stimulate the research on enhancing the waste management, to promote the recycling of waste from households and the industry, to promote the reuse of secondary raw materials and to discourage the direct use of natural resources, to initiate activities for the application of renewable energy²³.

²² <http://www.asm.md/>.

²³ <http://www.inqua-moldova.com/>.

3 Project planning

This chapter describes the planning process as far as relevant for the assessment against the evaluation criteria under Chapter 5.

- Project identification.
- Project formulation.
- Description of the underlying intervention theory.
- Funds mobilization.

3.1 Project identification

In early 2009, the Government of the Czech Republic agreed to provide seed funding (€110,000) to UNIDO for initiating a NCPP-Moldova. The Project activities were aimed at building capacity for RECP, raising awareness for RECP and demonstrating RECP benefits. The following activities were completed between June 2009 and December 2010:

- Training of some 20 national experts in RECP methods and practices, using the UNIDO CP Toolkit²⁴ (November 2009 – February 2010).
- Setting up of a national governance structure with a National Executive Board, and programme implementation by the National Programme Director in cooperation with a project support unit established at the host institution, namely the Technical University of Moldova.
- Completion of preliminary RECP assessments by national trainee experts in five companies, respectively: Chateau Vartely (winery); Prometeu (nut and fruit processor); Carmez (meat processing); Lactis (dairy) and Fabrica Elemente de Constructii (concrete producer) (May – October 2010).

The preliminary RECP assessments confirmed that RECP was applicable to Moldovan enterprises. They demonstrated that by focusing systematically on efficiency of use of materials, energy and water, it was possible to identify opportunities for streamlining and improvement, typically with limited investments yielding significant environmental and economic benefits including in companies with marginal profitability rates. It was found that for Moldovan industries to meet international environmental and other standards substantive investments are required for modernization of technology in use.

Furthermore, it was found that previous CP projects implemented under various donor programmes over the past decade (until 2009) had not resulted in sustainable impacts beyond the factory gates of the very few companies that had received grants for CP investments. The NCPP-Moldova was therefore designed to foster domestication and institutionalization of knowledge, expertise and service delivery capacity for Resource Efficient and Cleaner Production (RECP) in Moldova, and implementation of RECP practices, technologies and policies in the country. It does so by taking advantage of the resources, expertise and experiences of National Cleaner Production Centres and Programmes globally, as established by UNIDO in collaboration with UNEP, since 1994.

²⁴ UNIDO Cleaner Production Toolkit, United Nations Industrial Development Organization, Vienna, Austria, 2006, www.unido.org/index.php?id=o862050.

NCPP-Moldova adopted a sector-focus on food and beverage industries, construction materials' and municipal services (schools, hospitals, district heating, waste and sanitation services), as these were sectors generally considered most promising for vitalizing the economy and improving quality of life for Moldovan people.

The Project adopted the global programmatic framework of the UNIDO-UNEP RECP Programme to monitor enterprise level resource productivity and environmental benefits and to track progress in management, organization and governance of the NCPP which will also ensure that by Project completion the NCPP-Moldova would qualify as a regular member of the global RECP Network. Moreover, programme specific targets and indicators have been included in the logical framework.

Needs of target groups

The current status in developing and transitional economies is one of unsustainable economic growth which contributes to the continuation of poverty. This is rooted in high pollution and waste intensity of businesses and other organizations and their inefficient use of natural resources (including energy, water and materials). In turn, this has direct effects of environmental degradation and productivity losses, with several consequential effects, including reduced competitiveness of industries, constrained market access and unattended consumer needs for environmentally sound goods and services.

High intensities of resource use and waste generation are principally the result of low level of uptake of RECP concepts, methods, techniques and policies by industries and other organizations, in particular SMEs. A number of root causes maintain this situation. UNIDO and UNEP jointly identified four root causes for the low uptake of RECP, namely:

- There is limited awareness of opportunities for and benefits of CP and resource efficiency and advocacy is therefore limited.
- Policy and regulatory frameworks for CP do not exist or are not effectively enforced.
- Financial mechanisms available to enterprises and other organizations insufficiently cater to the specific features of CP investments.
- Existing service providers to enterprises, including in some cases the NCPCs/NCPPs, are insufficiently able to effectively support enterprises for the whole process of identification, evaluation and implementation of CP opportunities.

Past and ongoing CP and related initiatives had demonstrated that CP could be applied beneficially in Moldovan businesses, and could provide tangible benefits for businesses in terms of improved productivity, better product quality and reduced environmental impacts, with spin of benefits from freeing up severely constrained capacities in effluent/sanitation, waste and energy infrastructures.

As the Republic of Moldova is pursuing a regional integration agenda, pressure to improve environmental performance and increase energy and water prices is likely to increase substantially, leading to stronger incentives for enterprises to consider and implement RECP. However, the ability of enterprises and other organizations to respond in a proactive manner to such changes in the business environment is critically dependent on having access to a supply of value-adding RECP services that are appropriate and adapted to the present day realities experienced by Moldovan industry. It is therefore critically to further develop, professionalize and institutionalize the RECP service delivery capacity in the Republic of Moldova. This has also been recognized by the Government, as reflected amongst others in the letters requesting further support for the RECP Programme issued through the ministry of environment.

3.2 Project formulation

The following strategic directions have been taken into account to consolidate and expand the NCPP-Moldova²⁵:

- The **scope** of the NCPP-Moldova was broadened to from CP to RECP. This fostered a business oriented approach that aims to capture benefits in regards to production efficiency, reduction of wastes and emissions and safer and responsible production. This also aligns the NCPP-Moldova better with the global UNIDO-UNEP RECP Programme and its associated *RECPnet*.
- The **thematic focus** was being placed on reduction of waste water/effluents and waste minimization and management, in particular for organic waste. This aligns the NCPP with national human development priorities, in regard to resolving capacity constraints in water and sanitation and complementing the infrastructure investments that are being made. Moreover, this provides an opportunity for honing in on potential for value creation from the relative abundance of organic wastes/residues, e.g. as source for bio-energy or materials.
- **Priority sectors** for the NCPP-Moldova are food and beverage, construction materials and municipal services (including waste, sanitation, district heating, schools, hospitals, etc.). These sectors were at the time generally perceived to have greatest development potential, whilst they would also contribute to improvements in living standards.
- Complementary focus on **capacity building and industrial upgrading**. The entrepreneurial capacities of the business sector reportedly deserve further strengthening to improve business performance and long-term business-survival in Moldova. Albeit not specific to RECP, it impacts also on the ability of enterprises to appreciate the full benefits and importance of implementing RECP. The NCPP-Moldova therefore complements specific RECP content with additional modules on principles and practices of production economics and business management.
- Consultative and participatory approach to **policy formulation and implementation**. Enterprises and government agencies had not yet established a track record of joint achievement and trust. By focusing on win-win opportunities for environmental improvements in tandem with enterprise benefits, the NCPP aimed to make a positive contribution to resolving this stalemate. In its policy support component, the NCPP-Moldova includes stakeholders' consultations would contribute to creating agreed platform for changes conducive to implementation of RECP.
- The **institutional development** of the NCPP is to be streamlined for Moldova to access as a regular member the *RECPnet* by meeting its eligibility criteria for membership and being able to comply with its code of conduct. The professionalization and institutionalization of the NCPP-Moldova is guided by the requirements of *RECPnet* and its available resources to fast-track access to RECP-Net, which in turn would give Moldova access to an expanding knowledge basis and opportunity to participate in regional initiatives.

²⁵ Extracted from Project document "National Cleaner Production Programme (NCPP): Republic of Moldova" (UE/MOL/10/x01), June 2011.

Stakeholder involvement

UNIDO designed and developed the present NCPP-Moldova on the basis of the findings of the preparatory stage executed during 2009-2010. The preliminary programme design was presented to national stakeholders and the National Executive Board, respectively on 1 and 2 November 2010. This yielded broad support for the overall direction, with several additional suggestions which were incorporated in the final version of the project document.

In order to align the final institutional set-up for RECP service delivery in the Republic of Moldova with the national RECP strategy to be developed under the Project, the NCPP-Moldova was run as a project with a host institution providing support services, and thereby acting as a de facto project management unit. The host institution provided a home for the Project, its long term national staff (in particular the Programme Director and Technical Coordinator) and provides supportive services for coordination, training, administration, etc.

The Technical University of Moldova (TUM) through its Faculty of Energetics won the competitive tender to act as host institution during the preparatory stage in 2010.

The implementation of the NCPP-Moldova was directed by a National Executive Board (NEB), with tripartite participation from national government (represented by both the Ministry of Economy and the Ministry of Environment (co-chairs), business sector (represented by the Chamber of Commerce and Industry) and civil society (represented by the Academy of Science and INQUA (environment and development NGO)). This arrangement was put in place during the preparatory stage, and was further continued and strengthened over the course of the Project.

UNIDO (Project manager), Austrian Development Agency (ADA) Moldova (representing Austrian donor) and the National Programme Director were ex-officio members of NEB. UNIDO assumed full responsibility for the Project implementation and coordinate directly with the Government of Austria on administrative and financial matters, including financial and technical summary reports.

The two principal counterpart government agencies for the NCPP-Moldova are the Ministry of Economy and the Ministry of Environment.

- The Ministry of Economy recognized the importance of RECP for the modernization and development of the economy, and therefore committed to the following in regards to implementation of the NCPP-Moldova:
 - Co-convener and co-chair of the NEB with the Ministry of Environment.
 - Promoter and facilitator of the RECP service delivery to manufacturing and related sectors, including, as appropriate, through the development and implementation of relevant policy initiatives.
- The Ministry of environment also agreed to support the National Cleaner Production Programme as follows:
 - Co-convene and co-chair of the NEB with the Ministry of economy.
 - Promoter and facilitator of the RECP service delivery in particular as it contributes to the improvements and reductions in the generation of waste and waste water (and hence contributes to alleviating bottlenecks in water and sanitation).
 - Develop and implement appropriate policy initiatives to mainstream RECP in Moldova.
 -

Quality of project document and coherence of intervention logic

The logical framework of the project is found in the project document (pages 38-42) and also in the Annex B of this evaluation report. The three project outcomes clearly outline the approach for the bottom-up building of the RECP Capacity, RECP Implementation – all to the companies and enterprises and also for streamlining of RECP Policy and Strategy mechanisms into suitable regulations and policies. Overall, the three are well matched, yet can be seen as overambitious to the first and second outcome that target specifically the companies as the main beneficiaries. The adding of the third outcome should be understood mostly as the support function to the first two and when relevant to provide the venue and the platform for the policy contribution. It is obvious that managing a full-scale third outcome makes the project resources spread thin across different outcomes and pushes the project to accommodate the third quite different type of activity that requires substantially different types of skills and knowledge, namely policy related skills that differ from the first two.

Review of the outputs for each outcome proved to be consistent for the outcome 1 (capacity) and outcome 2 (implementation). The outcome 3 (policy) has the outputs that relate not only to the mechanisms for the streamlining but also to the substance of the policy (output 3.2) as well as the implementation of the related government policy enhanced (output 3.3). The other two relevant outputs provide for the assessment (output 3.1) and institutionalization of the framework (output 3.4). The exact interpretation for the output 3.2 and 3.3 read for the action plan development as a non-regulatory document that helps synergizing the efforts across the sectors while a broader interpretation can mean a stand-alone policy document. Exact interpretation of output 3.2 also reads the need for the trainings and skills formation of the relevant decision-makers and falls well under the outcome 3.

It is noted that the development of the RECP policy as a stand-alone document have been considered by far majority of stakeholders interviewed as counter-productive and unnecessary. Rather than developing a separate and new National RECP Strategy, the evaluators are of the view that the better approach is for government agencies in Moldova to incorporate relevant RECP concepts into already existing policy instruments, and allocate sufficient resources to the actual implementation of existing policies.

This complex policy issue is discussed in detail in Chapter 5, in particular Sections 5.1 (Project formulation), 5.2 (Ownership and relevance), and 5.5 (Impact and sustainability).

A detailed assessment of the deliverables and outcomes of the NCPP-Moldova against the performance indicators of the project log frame is presented in section 6.1, including performance rating.

Means of verifications and assumptions are coherent and relevant. Some observations relate to the fact that assumptions for the outcome 3 specifically output 3.2 are not specified and detailed. The development of the policy proposals carries higher risks as compared to the policy capacity building or creation of the streamlining platforms for the communication.

3.3 Description of the underlying intervention theory

Indicative review of past CP initiatives

Table 1 presents an indicative appraisal of the collective results from past CP and related projects in the Republic of Moldova (as reviewed during the preparatory stage

of the NCPP-Moldova over 2010). The review is categorized into the five common service areas promoted by NCPCs globally under the joint UNIDO-UNEP RECP Programme (in the respective rows). The columns provide a qualitative summary impression of the main achievements divided between outputs (the type and volume of activities delivered by the CP projects), outcomes (the level of uptake of CP methods, techniques and policies following these activities) and impacts (the level of benefits thereby achieved).

Table 1: Indicative review of results achieved through past CP initiatives in Moldova²⁶

Activity areas	Results chain		
	Level 1: outputs	Level 2: outcomes	Level 3: impacts
1. Information dissemination, awareness building and promotion.	<ul style="list-style-type: none"> Awareness and technical seminars for industry and other stakeholders held under different projects during 2001-2006 Case studies, manuals and website from different projects (ENSI, TACIS etc.) prepared during Project implementation but discontinued. 	<ul style="list-style-type: none"> No information on use of information materials and/or follow up activities by businesses and other organizations. 	<ul style="list-style-type: none"> No information available on impacts of the information provided as could for example have been reflected in change of behavior and/or increased motivation for CP.

²⁶ Extracted from Project document “National Cleaner Production Programme (NCPP): Republic of Moldova” (UE/MOL/10/x01), June 2011.

Activity areas	Results chain		
	Level 1: outputs	Level 2: outcomes	Level 3: impacts
2. Professional training (service providers and others).	<ul style="list-style-type: none"> • Training programmes on CP, EMS and energy efficiency were delivered with Norwegian support. • University course modules developed and introduced with support from EC. 	<ul style="list-style-type: none"> • Some knowledge and expertise retained on CP and energy auditing (including TUM). • Continued delivery of energy-efficiency modules in TUM courses. 	<ul style="list-style-type: none"> • Increased knowledge and skills of engineering graduates in energy efficiency.
3. In plant demonstrations/ Cleaner production assessments.	<ul style="list-style-type: none"> • In-plant assessments done with international experts for an estimated 30 companies (2001-2007) 	<ul style="list-style-type: none"> • Reports of some successful implementation in some assisted companies, demonstrating the applicability and benefits of CP for Moldova 	<ul style="list-style-type: none"> • Incomplete information on environmental, economic, social and/or other benefits actually achieved by companies.
4. Development and implementation of policies conducive to cleaner production.	<ul style="list-style-type: none"> • CP still to be included as overarching priority in industrial environmental management. 	<ul style="list-style-type: none"> • No evidence available 	<ul style="list-style-type: none"> • No evidence available
5. Transfer of environmentally sound technologies (ESTs).	<ul style="list-style-type: none"> • Couple of companies implemented intermediate cost ESTs with grants provided by international programmes. • Small revolving fund for CP investments was created (USD 25,000), and funded at least approximately USD 35,000 worth of CP investments. 	<ul style="list-style-type: none"> • Incomplete evidence of continued operation of grant sponsored ESTs, albeit at below design performance levels. • Revolving fund appeared not to have funded further investments after completion of Norwegian project support. 	<ul style="list-style-type: none"> • No evidence of replication of EST implementation beyond grant-supported companies.

In the project document, it was noted that past CP projects in Moldova produced useful outputs over the course of their implementation and contributed to some level of implementation of CP in companies that received technical and financial assistance. However 3-5 years after completion of the respective projects, evidence of continued implementation was patchy at best. Benefits from options implemented under the respective projects appeared at least in part to have been continued. However, there was no evidence of any replication (by other enterprises), nor of the organized retaining of professional or institutional capacities.

Specifically, the following was observed from Table 1 in the project document:

- Among the activity areas, professional training appeared to have been most successful this far. Some of the experts trained under past programmes had continued to promote CP and energy efficiency in their professional activities, but have not done so as their core duties or mandates. While informative outputs were produced as part of previous projects, the information had not further been actively disseminated or promoted after completion of respective projects, and hence was no longer available for implementation of CP and/or energy efficiency by businesses and other organizations.
- Further down the results' chain, information availability was very limited, in particular at the level of impacts (this is commonly observed in many countries globally).

Jointly, these CP and related initiatives had provided some evidence that CP is applicable in Moldovan businesses. Whilst CP options were beneficial from environment, productivity and cost perspectives, implementation had not happened at a significant scale. This was at least in part understandable in the context of the commonly reported challenges for doing business in the country, including in particular²⁷:

- Generally weak economic outlook.
- Deteriorated state of capital stock (hence undercapitalization (which adds further to financing challenges) and lower benefit/cost ratios for investment (expensive to retrofit with lower efficiency gains).
- Weak investment incentives (including inter alia absence of corporate tax).
- Inefficiencies in enterprise accounting and management capabilities and systems.

Barriers observed for the implementation of RECP in Moldova

Other factors that are specific barriers towards the implementation of RECP were for the project document summarized as in the figure below.

²⁷ Extracted from Project document "National Cleaner Production Programme (NCPP): Republic of Moldova" (UE/MOL/10/x01), June 2011.

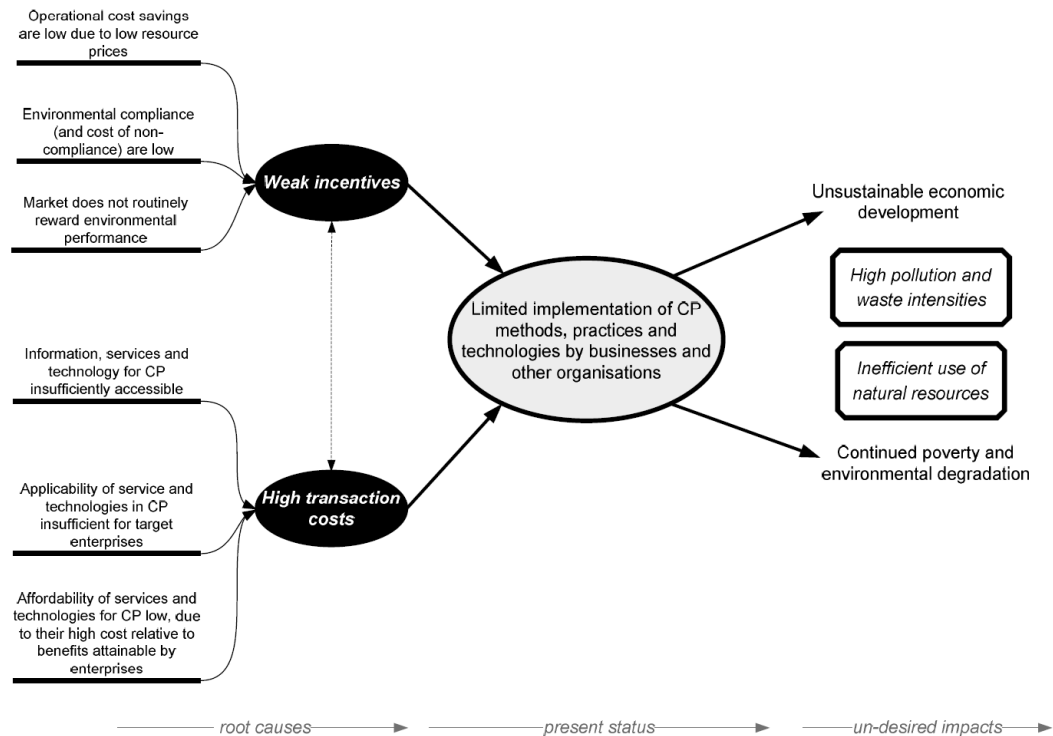


Figure 1: Problem analysis for limited uptake of CP methods, practices and technologies by Moldovan businesses and other organizations²⁸

Root causes for the low implementation of RECP in Moldova identified in the Project document:

- **Specific incentives for RECP were weak.** Generally incentives pertain to savings on:
 - Operational costs (on energy, materials, water and other essential process inputs).
 - Environmental compliance (and costs of achieving such).
 - Market recognition (for improved environmental performance).

In the Moldovan context, environmental compliance was not yet a significant consideration to businesses, whilst also the monetary value of operational savings was subdued due to low, albeit gradually increasing, prices of natural resources, including water and energy, and low fees for disposal of waste and effluents. Moreover, the domestic markets were at the time of project formulation unlikely to demand environmental compliance, given the serious challenges many Moldovans are experiencing in meeting their daily basic needs.

Under the NCPP-Moldova, the policy component assistance was provided to strengthen the national industrial and environmental policy framework and its implementation and enforcement, which would contribute to raising the specific incentives for RECP, arising from environmental compliance.

²⁸ Extracted from Project document “National Cleaner Production Programme (NCPP): Republic of Moldova” (UE/MOL/10/x01), June 2011.

- **Transaction costs for implementation of RECP were high.** This pertained to three factors:
 - Access to information, services and technologies for RECP.
 - Applicability of the available RECP services and technologies, and the value these generate to businesses.
 - Affordability as reflected in the costs of RECP services and technologies, compared to the benefits they generate to businesses.

Previous CP initiatives had only made a modest and time-bound contribution to increasing the availability of CP information and auditing services, from which only a few dozens of businesses had been able to benefit. Further efforts were considered necessary to improve applicability, by offering RECP methods, techniques and policies that are more valuable and/or easier to implement, and affordability.

3.4 Funds mobilization

UNIDO committed to support, with funding from the Government of Austria, the Government of the Republic of Moldova in its effort to consolidate and expand the NCPP-Moldova from its early achievements in 2010. UNIDO assists the Government of the Republic of Moldova, primarily through the Ministry of Economy and the Ministry of Environment, and their executive institutions, with the implementation of the collaborative NCPP-Moldova. The original budget for the NCPP in the Republic of Moldova is summarized in the table below.

Table 2: Budget for national cleaner production programme in Moldova (in €)²⁹

Budget line	Description	Year 1 July 2011- June 2012	Year 2 July 2012- June 2013	Year 3 July 2013- June 2014	Total budget July 2011- June 2014
11	International experts	€ 40,625	€ 51,250	€ 18,125	€ 125,000
15	Project travel	€ 3,000	€ 3,500	€ 3,500	€ 10,000
16	Missions	€ 3,000	€ 3,500	€ 3,500	€ 12,250
17	National experts	€ 52,800	€ 61,200	€ 52,800	€ 166,800
21	Subcontracts	€ 14,000	€ 15,000	€ 16,000	€ 45,000
32	Study tours	€ 15,000	€ 0	€ 0	€ 15,000
33	In service training	€ 5,000	€ 9,500	€ 9,500	€ 24,000
35	Non UNDP meetings	€ 3,000	€ 3,000	€ 3,000	€ 9,000
45	Equipment	€ 12,000	€ 8,000	€ 0	€ 20,000
51	Sundries	€ 4,000	€ 5,625	€ 5,803	€ 15,428
82	Evaluation	€ 0	€ 0	€ 15,000	

²⁹ Extracted from Project document “National Cleaner Production Programme (NCPP): Republic of Moldova” (UE/MOL/10/x01), June 2011.

Budget line	Description	Year 1 July 2011- June 2012	Year 2 July 2012- June 2013	Year 3 July 2013- June 2014	Total budget July 2011- June 2014
Net total		€ 154,675	€ 160,575	€ 127,228	€ 442,478
Programme support costs (13%)		€ 20,108	€ 20,875	€ 16,539	€ 57,522
Grant total		€ 174,783	€ 181,450	€ 143,767	€ 500,000

4 Project implementation

As evidence for the assessment of the NCPP-Moldova against the evaluation criteria in Chapter 5, this chapter describes the following:

- Financial implementation.
- Management.
- Outputs.
- Company level impacts and savings.

3.5 Financial implementation

The three-year Project was formally approved in June 2011 and implementation commenced upon agreement and release of project funding in September 2011. The approved budget is €500,000 (inclusive of programme support costs). A zero-cost one year extension was agreed in October 2014, with a view to complete the project by 30 September 2015.

Table 3 provides a summary status, based on financial reporting from UNIDO as 30 June 2015, including breakdown by budget line/expense category and Project year. The tail end of expenditures in 2011 (Project was approved in Oct 2011) report to 2012 due to change over in accounting system. UNIDO noted that distribution by budget line is somewhat indicative as sometimes several smaller expenditures have been lumped up and then report to one budget line. By 30 June 2015, about 94% of total budget of € 500,000 had been committed. The total Project budget will essentially have been fully utilized by at the end current phase of the NCPP-Moldova at end of September 2015.

As per the table below, national consultants and staff account for 48% of the total expenditures. In the view of the evaluators, this fraction is justified to successfully deliver the specified activities in the three work streams over the four years of Project implementation. Building upon experiences from other similar NCPPs, most of the Project activities (e.g. development and delivery of capacity building and trainings, multi-stakeholder coordination, project management, project reports and publications, etc) can be regarded as time and resource intensive.

The financial reporting provided to the evaluators do not present figures in a way that allows for a proper assessment of type of expenditures per outcome and/or work stream. Provision of the information in this format including itemization as per each work stream would have facilitated the evaluation.

Table 3: Summary of project expenditures and breakdown percentages as per June 2015

Items	As per 30 June 2015					
	2012	2013	2014	2015	Total	% of expenditures
Staff & intern consultants	€ 26,649	€ 9,216	€ 22,926	€ 19,943	€ 78,733	19%
Local travel	€ 9,402	€ 3,225	€ 1,242	€ -	€ 13,870	3%
Staff travel	€ 4,646	€ 2,036	€ 4,121	€ 1,070	€ 11,873	3%
Nat.consult./Staff	€ 67,539	€ 43,422	€ 47,733	€ 41,894	€ 200,589	48%
Contractual services	€ 4,320	€ 480	€ 3,315	€ 41,488	€ 49,603	12%

Items	As per 30 June 2015					
	2012	2013	2014	2015	Total	% of expenditures
Train/Fellowship/Study	€ 27,147	€ 15	€ 3,520	€ 4,282	€ 34,964	8%
International meetings	€ -	€ -	€ -	€ -	€ -	0%
Equipment	€ 3,062	€ 14,589	€ -	€ -	€ 17,651	4%
Other direct costs	€ 4,208	€ 547	€ 2,434	€ (38.09)	€ 7,151	2%
Total direct cost	€ 146,973	€ 73,531	€ 85,291	€ 108,639	€ 414,434	100%
13% PSC	€ 19,107	€ 9,559	€ 11,088	€ 14,123	€ 53,876	
Grand total	€ 166,080	€ 83,089	€ 96,379	€ 122,762	€ 468,311	
% of expenditures	35%	18%	21%	26%	100%	
Budget					€ 500,000	100%
Remaining					€ 31,689	6%

4.2. Management

As illustrated in Figure 2, the implementation of the NCPP-Moldova is directed by a National executive board (NEB), with tripartite participation from national government (represented by the Ministry of economy and the Ministry of environment (co-chairs), business sector (represented by the Chamber of commerce and industry) and civil society (represented by the Academy of science and INQUA). This arrangement was put in place during the preparatory stage, and was continued and strengthened over the course of the project.

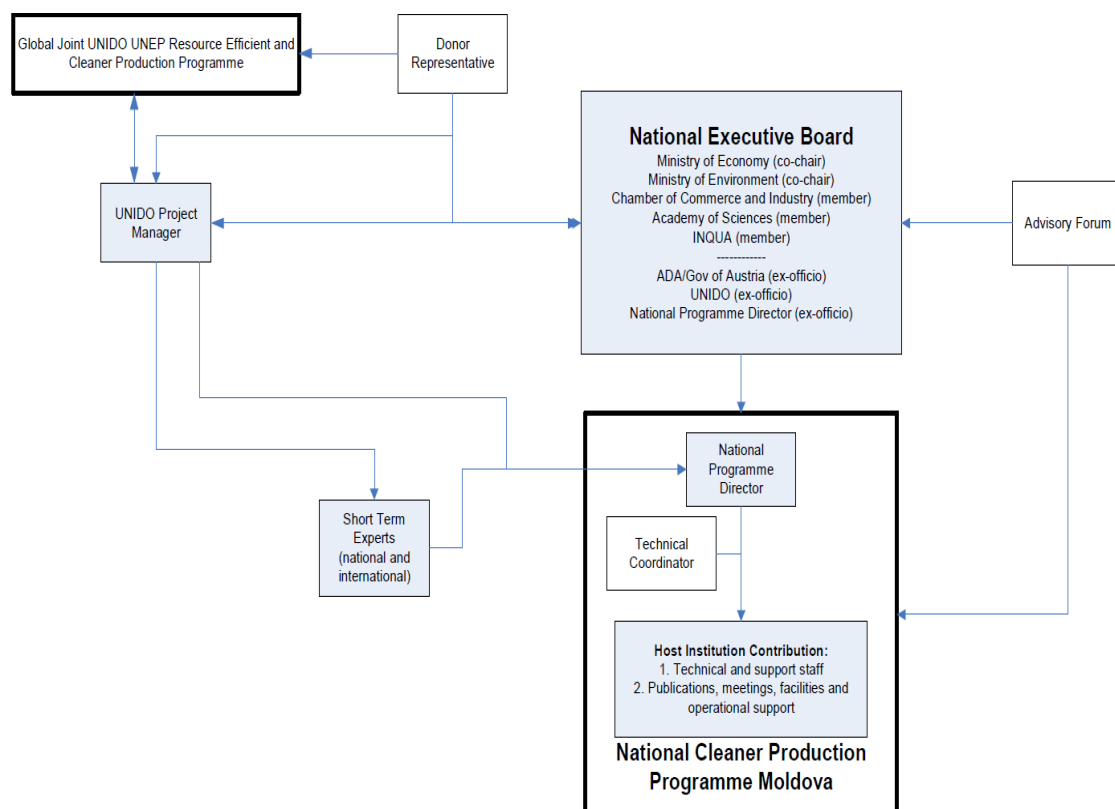


Figure 2: Institutional arrangement of operation of the NCPP-Moldova (shaded parts were already put in place during preparatory stage)³⁰

UNIDO (Project manager), Austrian development agency (ADA) Moldova (representing Austrian donor) and the National programme director were ex-officio members of NEB. UNIDO assumed full responsibility for Project implementation and coordinated directly with the government of Austria on administrative and financial matters, including financial and technical summary reports.

In total, ten meetings of the National executive board (NEB) were held throughout the Project (e.g. four meetings in 2012, one meeting in 2013, three meetings in 2014, two meetings in 2015).

The NCPP-Moldova core team operated as per its mandate throughout the project. The Project Manager and National Programme Director regularly consulted on progress achieved throughout the Project.

Narrative reports of activities were prepared for the donor for 2012, 2013, and first 6 months of 2014. A draft progress report covering entire 2014 had also been prepared and discussed with NEB prior to the present evaluation. These complemented internal reporting.

As per the Project document, the NCPP was run as a project with the host institution providing support services, and thereby be acting as a de facto project management unit. The host institution (TUM) provided a home for the project office, its long term national staff (in particular the programme director and technical coordinator) and supportive services for coordination, training, administration.

Summary of contracted staff through NCPP-Moldova throughout the duration of the project³¹:

- 2012: 2 full time staff and 13 associated experts (part time).
- 2013: 3.5 full time staff and 3 associated experts (part time).
- 2014: 3 full time staff and 2 associated experts (part time).
- 2015: 3 full time staff and 5 associated experts (part time).

The evaluators judged that the above staffing was sufficient to successfully deliver the specified activities in the three work streams over the four years of project implementation.

Since its initiation in early 2010, NCPP-Moldova has maintained its office in the building of the Faculty of Energetics of the Technical University of Moldova (TUM). Yet with greater involvement of experts from the Faculty of Architecture and Urbanism of TUM (for the RECP demonstrations in public buildings) the NCPP became somewhat split between two locations within TUM. An effort was initiated in late 2013 to reconsolidate the NCPP activities under one roof at TUM. The responsibility for TUM contracted coordinator (1 part time person) included support for the project website, publishing related materials and facilitating the project office logistics. Activities

³⁰ Extracted from Project document “National Cleaner Production Programme (NCPP): Republic of Moldova” (UE/MOL/10/x01), June 2011.

³¹ It is noted that these full time positions during 2014 and 2015 were shared between NCPP-Moldova and EaP Green implementation in Moldova.

envisaged in the greater role of TUM in provision of the services and making available of the staff of the experts from the university decreased over the years. The core team of the project carried out the rest of the activities – without the participation of TUM - throughout the life of the project.

4.3 Outputs

A summary of the outputs delivered through the project is provided below. Further details are included in the assessment against the project log frame (section 6.1), list of reference documents (annex D), and overview of key dates and project activities in 2012-2015 (annex E).

Work stream: Capacity building (Output 1)	<ul style="list-style-type: none"> • Continued operation of National executive board from 2012-2015. • 7 awareness raising workshops per RECP club cycle. • 1 national Project conference (2nd planned at project closure), and presentations at 3 international conferences. • 40 technical RECP experts trained
Work stream: demonstration and replication (Output 2)	<ul style="list-style-type: none"> • 32 implemented RECP assessments at enterprises (7 detailed assessments, 25 self-assessments through Clubs). • 8 ongoing detailed assessments as part of the 2015 training cycle of national experts. • 24 RECP assessments completed in public buildings. • 46 RECP self-assessments are in progress (second/third cycle of RECP Clubs in Causeni and Ungheni). • 3 RECP Clubs established in Chisinau, Causeni, Ungheni (25 enterprises in first cycle) + 46 enterprises in current second/third cycle). • Implementation monitoring in 7 companies, and 25 club members. <ul style="list-style-type: none"> ○ Reported annual environmental savings estimated at 3,015,000 kWh, 148,000 m³ water, 52,3 tones of materials. ○ Reported economic savings estimated at € 290,000 annually (total of € 870,000 over past 3 years).
Work stream: Policy support (Output 3)	<ul style="list-style-type: none"> • RECP policy gap assessment report. • Study tour delivered for senior policy makers to Austria in 2012. • Introductory training on policy instruments for RECP delivered in 2015 • Liaison and engagement with various national and international stakeholders on policy instruments towards implementation of RECP in Moldova, including consultation workshop, policy review study. • Piloting of RECP Clubs Model in three regions (2013 – 2014) as a RECP policy measure. • Contributions to including RECP concept into approved National environmental strategy 2014-2023 of the Ministry of environment. • Draft roadmap towards implementation and coordination of RECP on a national level. •

4.4 Company level impacts and savings

Success indicators

The 2007/8 Independent Evaluation of the UNIDO-UNEP NCPC Programme pointed to weaknesses in the monitoring of programme results, in particular at the impact level (that is in regards to the benefits achieved from RECP implementation and hence the practical contributions to the development objective of the Programme). The revised UNIDO-UNEP RECP Programme therefore puts much greater emphasis on monitoring and, to the extent reasonably feasible, verification of Programme achievements. For the NCPP-Moldova this is particularly reflected in the outcome-output-activity stream on RECP Implementation and Replication.

The ultimate success of the NCPP-Moldova are improvements in the resource use and waste/pollution intensities of businesses and other organizations. The success indicators at this micro-level are the relative improvements in ratios of productive output (value) per unit of energy, water and material consumed by the respective enterprise and per unit of waste and emission generated by the respective enterprise. These intensity indicators are utilized at enterprise and/or organization level as these are the most meaningful for motivating businesses, governments and other stakeholders to get involved in fostering the further uptake of RECP³².

Additional data was collected for the total resource use benefits (aggregated reduction in energy use, water use and materials' use), total environmental benefit (aggregated reduction in greenhouse gas emissions and other key waste/emission indicators) and total economic impact (total of investments made and annual savings achieved).

The project's resources and training events for RECP assessors/auditors was improved to ensure that at company level the necessary information is routinely collected to calculate resource use and waste/pollution intensities for assisted companies, both before and after implementation of the RECP opportunities identified with the support of RECP Programme.

In addition to the enterprise-level impact monitoring, a further set of programme level indicators was developed covering the main activities and outputs of the NCPP-Moldova. The project logical framework provides a summary of the monitoring framework and indicators. Using this framework as a starting point, it was proposed to set yearly a more comprehensive indicator set with specific targets that cover micro-indicators (enterprise), meso-indicators (pertaining to NCPP and its responsiveness to global trends and developments) and macro (policy/country) indicators, with environmental, resource productivity and institutional dimensions. These are incorporated into the annual work plans for the NCPP.

Project achievements

The implementation monitoring in 7 companies and 25 club members reports the following implemented savings to date:

- Savings in electricity use of 3,015,000 kWh per year.
- Reduction in water consumption of 148,000 m³ water per year.

³² A further description and justification for the enterprise level indicators can be found in: Enterprise Level Resource Productivity and Pollution Intensity Indicators: a primer for small and medium enterprises, UNIDO and UNEP, 2010.

- Reduction in material consumption of 52,3 tonnes per year.
- Economic savings estimated at € 290,000 annually.
- A total of € 870,000 monitored savings can be reported over the period of 2012-2014 (assuming constant economic savings over subsequent years). It is noted that annual economic savings have likely have increased over time as companies implement more RECP options. Hence the cumulative savings are likely to be higher.

Important note: The monitoring of implementation, as reported here, do not yet cover the results from the RECP self-assessments undertaken with 46 enterprises as part of second/third cycle of RECP Clubs in , Causeni, Ungheni, so environmental and economic savings at the end of the current phase will be higher than reported above. 8 detailed RECP assessments are ongoing. As a spin off from the Project two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises and the RECP club model is replicated to five countries under EaP GREEN.

A representative and extensive sample of savings at the beneficiary companies were verified through a quality check of 10 RECP assessment reports, site visits to 6 companies and public institutions participating in the project, quality and consistency review of excel spreadsheets with accumulative project results and interviews with project beneficiaries, project team members and RECP Club Coordinators.

The tables below provide further detail on the monitored environmental and economic savings achieved through NCPP-Moldova. Table 4 illustrates that a substantial number of options and savings have been identified and implemented by the companies. As presented in

Table 5, the project identified and quantified substantial environmental and economic savings in public buildings. RECP investments for two buildings are now implemented with funding under the National energy efficiency fund, and it is anticipated that more funding applications will be successful to enable the implementation of more RECP investments in public buildings.

Table 4: Cumulative environmental and economic savings from RECP options identified and implemented in companies in period 2012-2015³³

	Total identified	Total <u>implemented</u> at the <u>enterprises</u>		
		Total implemented	RECP full scale assessments	Self-assessments of RECP Club members
Number of assessments	32	32	7	25
Reduction in material consumption (tonnes)	417	157	72	85
Reduction in water consumption (kl)	369,279	444,156	89,111	355,045

³³ Based on 2012-2013-2014 Annual Progress Reports and Excel spreadsheet with RECP benefits assessed companies and club members in three regions 2012-2014 (version 12 June 2015), As provided by NCPP-Moldova.

	Total identified	Total <u>implemented</u> at the <u>enterprises</u>		
		Total implemented	RECP full scale assessments	Self-assessments of RECP Club members
Energy savings (in MWh)	11,152	9,044	8,173	871
Reduction in CO ₂ emissions (kt)	3,750	3,179	2,803	376
Cumulative savings (€)	1,000,607	868,369	653,569	214,800

Table 5: Annual environmental and economic savings RECP options identified in public institutions in period 2012-2015³⁴

	Total identified at the public institutions	Identified in each of three regions Ungheni, Causeni, Chisinau		
		Ungheni	Causeni	Chisinau
Number of assessments	24	12	6	6
Reduction in water consumption (kl/yr)	-	-	-	-
Energy savings (in MWh/yr)	21,028	12,944	4,476	3,608
Reduction in CO ₂ emissions (kt/yr)	4,458	2,744	949	765
Annual savings (€/yr)	826,752	508,912	175,998	141,842

4.5. Replication, spin-off projects, continuity, and contingency/risks

Replication

The principal avenue for replicating RECP was through RECP Clubs which under the Project have been developed and successfully piloted in Chisinau, Ungheni, and Causeni regions, in cooperation with the mayor's offices. 25 enterprises successfully completed the cycle of 7 modules with a company specific RECP action plan in 2014 and another 46 are well on the way to complete similarly before end of the Project. Under EaP GREEN two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises, and the RECP club model is replicated to five countries.

Replication activities were foreseen to scale up RECP applications in enterprises and public buildings by minimizing the necessary expert input per assisted company.

A two-tracked replication strategy was developed and implemented as part of the Project.

1. For public institutions (such as schools, hospitals, kindergarten etc.) a RECP guide was prepared with a key focus on buildings and installations (e.g. heating,

³⁴ Based on 2012-2013-2014 Annual Progress Reports and Excel spreadsheet with final RECP results from assessments of public institutions (version 12 June 2015). As provided by NCPP-Moldova.

ventilation, water and sanitation), based on the results achieved from 12 demonstrations in public institutions. The draft guide was completed in spring 2013. The first version has been trialed with another 12 public institutions between July 2013 and June 2014.

2. For the industry sector, the club programme was promoted with a view to its actual trial and roll out. Following earlier expressions of interest in the programme from the municipalities of Ungheni, Causeni and Chisinau, it was agreed to run a parallel pilot of RECP clubs in these three municipalities. In Ungheni and Causeni two preparatory meetings were organized to promote the programme (during September-October), after which the three Clubs were then officially launched with their first Module at the end of November 2014. These three RECP Clubs have started with a total membership of 29 enterprises.

The model of the RECP clubs is based on regional groups of SMEs as these exist for example through EcoProfit Programmes (originating from Austria and elsewhere) and waste minimization clubs (originating from UK). Such groups receive targeted instructions on consecutive RECP topics through a series of workshops, and then implement each of these topics in their own enterprise with the guidance of national experts. The success of this Club model is depending on having available a self-assessment/resource package for enterprises.

Spin-off projects

The NCPP-Moldova is being used as a platform for launching complementary RECP activities and thereby avail additional human, technical and financial resources for scaling up and mainstreaming RECP in the Republic of Moldova.

1. The 3-year **UNIDO regional RECP programme for the greater Balkan region** funded by the governments of Austria and Slovenia provides for thematic upgrading and knowledge sharing between NCP/NCPPs in six target countries (Albania, Croatia, Macedonia, Montenegro, Moldova and Serbia) on three topics, respectively low carbon industrial development, innovative chemical solutions and sustainable tourism.

In 2013, the NCPP National programme director participated in the kick off meeting (on 13th April 2013 in Vienna) and two of the NCPP national experts participated in the advanced training on low carbon industry in Macedonia (6th-13th October 2013). These national experts have started follow up assessments on low carbon technologies for two of the companies that had been subjected to a RECP assessment in 2012 under the NCPP.

In March 2014 two NCPP-Moldova staff participated to the coordination workshop under regional networking for strengthening cooperation and fostering transfer and adaptation of resource efficient and cleaner production (RECP) in the countries of South-Eastern Europe program, and contributed with a presentation on the status of implementation of the Moldovan low carbon pilot project. The workshop served as a platform to discuss progress of the project including what was achieved and what will be the next steps, and to identify mechanisms to move forward to a successful project implementation. Innovative chemical solutions will be the next topic that NCPP-Moldova is considering to undertake under this initiative.

Also in 2014, two of the NCPP national experts participated in the low carbon industry advanced training in Graz, Austria. The respective national experts presented the results on the assessments for two companies on low carbon technologies in the Republic of Moldova. The experts have been provided with

expertise to the project, discussed the future strategies of the project activities related to low carbon production.

2. **EaP GREEN** is the multi-agency cooperation programme implemented by Organization for economic cooperation and development (OECD), United Nations economic commission for Europe (UNECE), United Nations Environment Programme (UNEP) and UNIDO aimed at supporting the greening of economies in the countries of the Eastern Partnership region (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) (see e.g.: <http://www.oecd.org/env/outreach/eapgreen.htm>).

Under EaP GREEN UNIDO is responsible for a demonstration component on RECP, which is funded by the EU, Government of Slovenia, Development Bank of Austria and UNIDO. On 10-11 February, 2014 a kick off meeting on the RECP Demonstration Component was organized at UNIDO Headquarters. Newly recruited members of the national teams from six countries of the EaP GREEN have been familiarized with the aims and expectations of the RECP Demonstration Component, and provided with information on UNIDO expertise in the RECP area, including tools, publications and web resources. The participants have been able to establish working linkages, share views on options for successful realization of the planned activities at the national and regional levels. NCPP-Moldova director participated to the kick off meeting, and contributed with a presentation on the status, aims and achievements of NCPP-Moldova.

Since the startup training of EaP Green, further activities under this program have been completed as part of EaP Green in Moldova, including

- Training of five additional experts
- Completion of detailed assessment in five enterprises
- Domestication of workshop on RECP concepts and associated development of primer and advocacy strategy
- Launch of RECP Clubs in Orhei and Balti municipalities
- Participation of project team in three additional regional training and networking events.

Continuity through independent operation of NCPP-Moldova

Taking into account the achievements and lessons learned from the implementation of the NCPP, an assessment was foreseen of most appropriate long term plan for the NCPP, and the necessary institutional set up and legal entity required. Moreover, business and operational plans would be developed and promoted, with a view to secure continuation of RECP advocacy and RECP service delivery upon conclusion of the present Project.

This task was delayed due to difficulties of finding suitable national experts. The task is being undertaken by contracted experts in the period July to September 2015. The evaluators can therefore not review or comment on the appropriateness and quality of the long term plan and supporting business plans for independent operation of NCPP Moldova.

Contingency and risks

The project design in the project document included the identification of the preconditions and potential external risks, particularly considerations for an unstable political environment.

The frequent changes at the senior level at the ministries require contingency arrangements in the National executive board. For example, these frequent changes had an impact on NEB endorsing progress reports and work plans of the NCPP-Moldova. This is a topic for discussion in an upcoming NEB meeting to find a suitable contingency arrangement.

5 Assessment against evaluation criteria

The assessment outlined in this chapter is based on the analysis carried out in Chapters 2, 3, and 4. The chapter assesses the underlying intervention theory (causal chain: inputs-activities-outputs-outcomes). The following aspects are assessed:

- Project formulation.
- Ownership and relevance.
- Efficiency of implementation.
- Effectiveness.
- Impact and sustainability.
- Project coordination and management.
- Other aspects (e.g. gender mainstreaming and procurement issues).
- Key strengths and weaknesses.

5.1 Project formulation

The Project has been formulated in a clear and easy to follow manner. The logical framework of the project provided for the three outcomes that clearly outline the approach for the bottom-up building of the RECP Capacity, RECP Implementation – all to the companies and enterprises and also mechanism for RECP policy and strategy mechanisms for their streamlining into suitable regulations and policies. The third outcome focusing on policy development beyond a support function was somewhat over-ambitious and may have set too high expectations taking into account the ongoing political instability and project budget. Managing a full-scale third policy outcome made the project resources spread thinner across the three project outcomes.

Review of the outputs confirmed consistency for outcome 1 (capacity) and outcome 2 (implementation). Outcome 3 (policy) had outputs that relate not only to the mechanisms for the streamlining but also the substance of the policy (output 3.2) as well as the implementation of the related government policies enhanced (output 3.3). The exact interpretation for the outputs 3.2 and 3.3 read for the action plan development as a non-regulatory document that helps synergizing efforts across the sectors while a narrower interpretation could have meant a stand-alone policy document of one of the line ministries. Exact interpretation of output 3.2 also reads the need for the trainings and skills formation of the relevant decision-makers and falls well under the outcome 3. Key activities under outcome 3 are generally well aligned, yet activities 3.2.1 and 3.2.3 if interpreted exactly mean some proposals of the policy instruments, separately or part of a RECP Strategy, while a narrower interpretation could have meant a stand-alone process for a separate strategy development – at least this is how it had been interpreted by some members/or ex-officio of the National executive board.

According to the timeframe of the project, activities 3.2.1 (policy instruments to be proposed for the inclusion in the RECP Strategy) and 3.2.3 (policy instruments proposals) were scheduled to be carried out in the course of the first year. One stakeholder present during the interviews and meetings voiced for the presentation of the RECP strategy as part of the project, while the other voiced the need for the proposition of the amendments in existing policy documents. The view that a separate stand-alone RECP strategy would not be warranted in light of existing references to RECP or alike in already endorsed policy documents, presented by international expert and UNIDO project manager, received widespread support during both policy related stakeholder consultations, and by the majority of the members of NEB, yet not

unanimously by a NEB member (including ex officio member). One solution would have been for the NEB members to clarify the logical framework to avoid any of the possible interpretations.

The current project was designed on the basis of the findings of the preparatory stage executed during 2009-2010. The preliminary programme design was presented to national stakeholders and National executive board in November 2010. These efforts seem to have yielded the support for the overall direction, with several additional suggestions which had been incorporated in the final version of the project document.

The Global RECP Programme was formulated in response to the conclusions and recommendations from evaluation of the overall UNIDO-UNEP Cleaner Production Programme³⁵. The NCPP-Moldova was formulated and implemented in accordance with the Global RECP Programme.

Table 6 contains the score card for “Project formulation”. It demonstrates that the views, capacities and experiences from key stakeholders have been taken into account satisfactory in the project document.

Table 6: Assessment score card for “Project formulation”

Project stakeholders and beneficiaries	Rating	Justification and comments
Views, perceptions and experiences of the target group in project formulation		
Enterprises and SMEs in particular in the food, construction materials, municipal services	High	<ul style="list-style-type: none"> Views from SMEs in selected sectors were represented by the Chamber of commerce, ministry of agriculture, and sector associations (although names of sector associations are not available to the evaluators). UNIDO designed and developed the present NCPP-Moldova on the basis of the findings of the preparatory stage executed during 2009-2010, including experiences from enterprises and SMEs in food, construction materials, municipal services.
Government of Moldova (Ministries of economy, environment)	Medium	<ul style="list-style-type: none"> The policy activities and outputs for work stream 3 as outlined in the log frame are generally well aligned, but some project

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[www.unido.org/fileadmin/user_media/About UNIDO/Evaluation/Thematic reports/CP%20Progr%20eval%20report_ebook.pdf](http://www.unido.org/fileadmin/user_media/About_UNIDO/Evaluation/Thematic_reports/CP%20Progr%20eval%20report_ebook.pdf).

Project stakeholders and beneficiaries	Rating	Justification and comments
NGOs and business associations	High	<p>outcomes were interpreted differently by project stakeholders.</p> <ul style="list-style-type: none"> • Preliminary programme design was presented and discussed with the National Executive Board on November 2010, including representation from Ministry of Economy, Ministry of Environment, and Chamber of Commerce
Donors (Government of Austria, present phase, and Government of Czech Republic, preparatory stage)	High	<p>At the time of project formulation, it was important for the Government of Austria to address capacity building, regional development, and cross-cutting issues related to reduction of waste water/effluents and waste minimization and management, in particular for organic waste, energy, water, materials. These development issues have been addressed in the design and formulation of the project.</p>

5.2. Ownership and relevance

Ownership is reflected in commitments by local stakeholders to maintain the project (NCP-Moldova) and its outcomes, locally in Moldova as well as possibly globally, through the UNIDO-UNEP RECP Programme. It could cover (co-) funding of programme activities, providing expert inputs, implement policy conducive to RECP implementation, and other forms of recognition and endorsement. Ownership by enterprises is reflected by their willingness to invest their own resources (e.g. time, effort, and finance) in the identification and implementation of RECP measures, and participation in trainings and RECP Club meetings. Ownership can relate to RECP (as a concept and business practice), the national centre (NCP-Moldova as an institution) and RECPnet (the global programme and the network of NCPs supported by, or participating in, the UNIDO-UNEP RECP Programme).

Relevance results from a combination of “*applicability*” (evidence or at least a reasonable expectation that the intended beneficiaries have the financial, human, technical, managerial and other resources needed to benefit from the NCP) and “*value*” (evidence or at least a reasonable expectation that the intended beneficiaries can gain a net benefit (financial, health and safety, reputation, etc.) for themselves or their organization from RECP implementation).

The score card for “Ownership and relevance” is presented in Table 7, differentiated by the beneficiaries for the NCP-Moldova, respectively enterprises, public institutions, NGOs and business associations (e.g. Chamber of commerce and industry), and Government of Moldova (Ministry of economy, ministry of environment).

The score card clearly reveals that the ownership and relevance of RECP is high for enterprises, public institutions, and Chamber of Commerce and Industry. This is evidenced by a growing set of success stories and case studies from businesses and public institutions that have successfully implemented RECP. Implementation monitoring undertaken demonstrates the substantial environmental and economic savings have been identified and implemented as a result of the project.

To increase the ownership and relevance of the RECP trainings provided to enterprises and public institution, there is a need to institutionalise the RECP trainings by either certification of RECP trainings or licensing RECP experts by national authorities (e.g. Energy Efficiency Agency). RECP experts trained as part of the project are currently certified only with a UNIDO certificate.

For the government of Moldova (Ministry of Economy, Ministry of Environment), the relevance and ownership is rated low to medium for capacity building and medium for RECP demonstration and policy and strategy.

The project delivered various outputs and outcomes as part of its policy and strategy work stream, including a policy gap assessment, liaison and engagement with various national and international stakeholders on policy instruments towards implementation of RECP in Moldova, piloting the RECP Clubs Model, and contributions to including RECP concept into draft National Environmental Strategy 2014-2023 of the Ministry of Environment. A draft roadmap - Action plan - towards the coordination and integration of RECP policies and strategies on a national level is being produced.

On one hand there is an emerging consensus that a separate National RECP Strategy is not supported by key stakeholders and work of the NCPP should focus more on providing an enabling role towards the implementation and integration of already existing RECP related strategies. On the other hand however, there is a degree of disappointment among the ministries that a dedicated National RECP strategy with supporting multi-stakeholder engagement and training activities has not been achieved.

In the opinion of the evaluators, one of the underpinning causes for this divide is the capacity constraint in the country for developing and integrating government policies, across all sectors yet in particular for environment and subsequently also possibly for RECP, and their implementation. Furthermore, the evaluators are of the opinion that the responsibility for development and integration of RECP related policies and strategies should lie with the relevant government authorities, and not with the NCPP-Moldova. The evaluators though equally note the capacity constraints in particular in the Ministry of environment, which has also resulted in fact that the majority of environment, energy and natural resources related policies for Moldova over the past decennium have in fact been drafted by internationally supported Project offices, comparable to the NCPP. The development of the RECP policy as a stand-alone document have been considered by far majority as counter-productive and unnecessary, while proposing of some policy instruments would have been welcomed. The project produced a set of the proposals that have later been included in the chapter of the National Environmental Strategy – evidence could be traced back to the communication with the relevant expert - the result that has not been accounted. The project has also produced a draft action plan for the implementation of the RECP as well as some draft documents on the proposed amendments in the policy mechanisms and instruments that are to be circulated.

Table 7: Assessment score card for “Ownership and relevance”

NCPP- Moldova beneficiaries	Rating of ownership and relevance of project outcomes and outputs			Justification and comments
	RECP capacity building	REP demonstration	RECP policy and strategy	
Enterprises	Medium	High	High	<ul style="list-style-type: none"> Private sector companies and public institutions

NCPP- Moldova beneficiaries	Rating of ownership and relevance of project outcomes and outputs			Justification and comments
	RECP capacity building	REP demonstration	RECP policy and strategy	
Public institutions	Medium	High	High	involved in food / agribusiness, construction materials and municipal services' sectors show significant recognition and added-value of capacity building and implementation services provided by NCPP Moldova.
NGOs and business associations (e.g. Chamber of commerce and industry)	High	High	High	<ul style="list-style-type: none"> • Substantial environmental and economic savings have been identified and implemented as a result of the Project. • To increase the ownership and relevance of the RECP trainings to enterprises and public institutions, there is a need to institutionalise the RECP trainings by either certification of RECP trainings or licensing RECP experts by national authorities.

NCPP- Moldova beneficiaries	Rating of ownership and relevance of project outcomes and outputs			Justification and comments
	RECP capacity building	REP demonstration	RECP policy and strategy	
Government of Moldova (Ministry of economy, Ministry of environment)	Low to medium	Medium	Medium	<ul style="list-style-type: none"> • Industry-to-regulation/policy approach applied as part of NCPP Moldova has been proven to be successful (Piloting of RECP Clubs model in three regions). The learnings from the companies and with companies experience need to be formalized in the policies. • Emerging consensus that a separate National RECP strategy is not supported by key stakeholders. • The project contributed to including RECP concept into the National environmental strategy 2014-2023. This demonstrates ownership and increasing relevance of RECP to ministries (Ministry of environment in this case). • To increase the ownership and relevance to the ministries, further capacity building to decision makers and supporting experts on developing and integrating RECP policies and their implementation in Moldova is needed.

5.3. Efficiency of implementation

The score card for “Efficiency of implementation” is presented in Table 8.

The efficiency of the RECP capacity building and demonstration work is rated high. Although challenging at times, the National executive board have been operating throughout the Project which benefitted the efficient implementation. Trainings, promotion and outreach activities are perceived to have been run efficiently. The established RECP clubs are perceived as an efficient platform to implement and upscale RECP throughout the country.

The efficiency of the RECP policy and strategy work is rated medium. In the opinion of the evaluators, the project activities for work stream 3 (as outlined in the log frame) have not been clarified and tend to gear towards the development of a separate national RECP

document as expressed by one interviewed representative, and supporting activities associated with this strategy by the rest and as provided in the log frame. This created some confusion and inefficiencies in the delivery of the outcome 3. The facilitation and vehicle for the implementation of the work stream 3 activities has been guided by the NEB and evaluation of the needs for RECP policy document or policy instruments update, coupled with capacity building of key stakeholders.

The capacity building on RECP policies could have provided more insights amongst the different government agencies into the required development, implementation, and integration of RECP policy instruments in the country.

The institutionalization of the RECP service provision is an activity still under development at the time of this evaluation. This activity should become a key priority support for the remaining time of the Project to enable the NCPP-Moldova to transform into a legal entity with appropriate and supporting institutional arrangements. The evaluators understand that this task is being undertaken by contracted experts in the period July to September 2015.

Table 8: Assessment score card for “Efficiency of implementation”

N CPP-Moldova		Efficiency of implementation	
Project components	Implementation arrangement	Rating	Justification and comments
RECP capability	<ul style="list-style-type: none"> Guidance through National executive board Training and coaching of national experts through international experts RECP promotion and outreach through various media 	High	<ul style="list-style-type: none"> Although challenging and time consuming at times, the National executive board have been operating throughout the project which benefitted the efficient implementation. Trainings, promotion and outreach activities have been run efficiently.
RECP demonstration	<ul style="list-style-type: none"> Through RECP Clubs in three regions Building upon established UNIDO/UNEP methodologies 	High	<ul style="list-style-type: none"> It was time consuming to establish the RECP Clubs in three regions and build up the trust with enterprises and public institutions. Three RECP clubs are now perceived as an efficient platform to implement and upscale RECP throughout the country.

NCPD-Moldova		Efficiency of implementation	
Project components	Implementation arrangement	Rating	Justification and comments
RECP policy and strategy	<ul style="list-style-type: none"> Guided by policy gap assessment Through a planned national RECP strategy Through business and operational plans for operation of NCPD-Moldova 	Medium	<ul style="list-style-type: none"> The implementation of the work stream 3 activities was guided by the NEB, policy gap assessment, coupled with capacity building with key stakeholders. Targeted and substantial policy capacity building would have smoothed the understanding of the outcome 3. The development of a long term plan for independent operation of NCPD Moldova with appropriate institutional and legal legitimacy is being undertaken by contracted experts in the period July to September 2015. The evaluators can therefore not comment on the efficiency of implementation of this task.

5.4. Effectiveness

Table 7 presents the score card for “Effectiveness”.

The effectiveness of the RECP capacity building and demonstration is rated as high. Public institutions and private sector companies involved in food/agribusiness, construction materials and municipal services’ sectors show significant recognition of NCPD Moldova. Substantial community of technical RECP experts created and active in RECP promotion in three regions. Substantial set of promotional and outreach has been delivered through the project which seems to meet the needs of target audiences.

The effectiveness of the work done to date on the RECP policy and strategy is rated as medium.

On one side, NCPD-Moldova played an important supporting, facilitating, and piloting role towards RECP policies in the country, including (1) the contributions to the draft National environmental strategy 2014-2023 (as evidenced by the technical consultants working of the former draft document), (2) providing the vehicle (NEB) for the discussion of the RECP policy developments in the country, and (3) piloting of RECP Clubs model in three regions as an industry-to-policy (bottom-up) measure.

At the same time, the evaluation of the gaps in existing policies and the expert conclusion on the preference of a more hands-on approach to policy implementation builds up emerging consensus that a separate National RECP strategy is not the most effective means towards implementation of top-down policies. However, key

stakeholders have to agree yet on the most effective RECP policy instruments in country. Further capacity building should be the key to smoothen this understanding. The developed strategic policy document³⁶ and the detailed proposals for some policy instruments (to be worked out into specific regulatory proposals) presented by the project consultants and discussed during project workshops provide a solid bases to continue the work. There is a need to create synergies between existing policies and strategies and implementation support. To address this, there is a need for further capacity building for developing and integrating RECP policies and their implementation.

Table 9: Assessment score card for “Effectiveness”

N CPP-Moldova		Effectiveness and utilization of results	
Project components	Intended outcomes	Rating	Justification and comments
RECP capability	<ul style="list-style-type: none"> Recognition of NCPP-Moldova by private and public sectors and civil society. 	High	<ul style="list-style-type: none"> Public institutions and private sector companies involved in food/agribusiness, construction materials and municipal services’ sectors show significant recognition of NCPP Moldova. Substantial community of technical RECP experts created and active in RECP promotion in three regions. Substantial set of promotional and outreach has been delivered through the Project which seems to meet the needs of target audiences.
RECP demonstration	<ul style="list-style-type: none"> Reduced waste and pollution intensities of enterprises. Increased resource productivity of enterprises. Reduced operational and compliance costs of enterprises. 	High	<ul style="list-style-type: none"> Substantial environmental and economic savings have been identified and implemented as a result of the Project. More identified RECP savings can be achieved subject to access to RECP related funding schemes.

³⁶ Draft “Roadmap on RECP Strategy” for the Republic of Moldova (11 June 2015).

NCPD-Moldova		Effectiveness and utilization of results	
Project components	Intended outcomes	Rating	Justification and comments
RECP policy and strategy	<ul style="list-style-type: none"> Increased role for RECP in environmental, industry and other relevant policies at appropriate administrative levels. 	Medium	<ul style="list-style-type: none"> Industry-to-regulation/policy approach applied as part of NCPD Moldova has been proven to be successful (Project and NEB as a facilitator, coordinator of policy gap analysis and drafting proposals for policy instruments while RECP Clubs embrace the industry). NCPD has played an important supporting, facilitating, and piloting role towards RECP policies and strategies in the country. Emerging consensus that a separate National RECP Strategy is not supported by key stakeholders. Key stakeholders have to agree on most effective RECP policy instruments in country. There is a need to create synergies between existing policies and strategies and implementation support. There is a capacity constraint in the country for developing and integrating RECP policies and their implementation. Therefore further capacity building in RECP policy/RECP policy instruments is needed.

5.5. Impact and sustainability

The sustainability is rated on the basis of the likely presence of drivers/incentives for RECP, or, more generally, project sustainability factors, in particular:

- Willingness of target industries, governments and/or other organizations (including donors, etc) to pay for the provision of RECP services.
- Continued availability of the know-how and skills to deliver high quality and effective RECP services.
- Consensus about the relevance and benefits of RECP (“critical mass”).
- Presence of framework conditions conducive to RECP (e.g. legislation, policy, tax, financial incentives).

- Technology push (availability of new CP technologies/practices customized to local industry needs and capabilities).
- Market push for RECP (through prices for water, energy, waste, materials, etc).
- Market pull for RECP (exerted through the supply chains that target industries are part of or would aspire to become part of).

Based on the project sustainability factors outlined above, the score card for “Impact and sustainability” is presented in Table 10. The top half assesses whether the above ‘sustainability factors’ would continue to exist. The bottom half contains a rating of the impacts of the availability of these factors on the sustainability of current and future RECP benefits.

The score card indicates the following:

- It is very likely that most categories of incentives for RECP will remain in place at least at the current levels and possibly even strengthen further, including: willingness to pay, critical mass, technology and market push, and possibly also framework conditions. There is further work to be done to sustain the work on the know-how/skills and framework conditions, as further detailed in the table below.
- The sustainability of the current and future benefits is rated medium to high in particular for productivity and environmental benefits achieved (outcomes) and availability of RECP services (outputs). Even though NCPP-Moldova plays a catalytic role for sustainable industrial development, this is confined to the priority sectors it has so far worked with.
- The curricula for training of the pool of experts as well as the publications on the good practices of RECP provide the solid bases for the future formation of relevant expertise. There is yet a way to be found to achieving greater sustainability of these trainings. The registration of the legal entity for NCPC, RECP action plan and specific policy instruments are to ensure the required elements of the sustainability.

Table 10: Assessment score card for “Impact and sustainability”

Project sustainability factors	Likely presence in absence of project in future	Justification and comments
Willingness to pay	Likely	There seems substantial industry demand for the delivery of a full RECP package of technical and access to finance solutions through new business ventures. Provided the RECP services are valuable and meet demands, businesses would be expected to pay for these.
Know-how / skills	Unlikely	Substantial community of technical RECP experts created and active in RECP promotion, and RECP Clubs have been created in three regions. There is a capacity constraint in the country for developing and integrating RECP policies and their implementation. Further training, coaching and institutionalisation is required to secure long-term sustainability of RECP know-how and skills in the country.

Project sustainability factors	Likely presence in absence of project in future	Justification and comments
Critical mass	Likely	While some critical mass is being created in the priority sectors, this is not yet similarly evident at the broader national level. Regardless however it is expected that this limited critical mass will at least remain, with potential to improve with continued collaborations with key government agencies and industry associations into the management of the NCPP-Moldova.
Framework conditions	Likely (short-term) Uncertain (long-term)	The continuation of the EaP Green Program until December 2016 provides de facto for a lean next phase of the present Project and/or transitional phase towards a full scale dedicated RECP Project in Moldova. There are developments and indications for framework conditions to swing either way (e.g. adaptation of RECP concept in the National Environmental Strategy versus the fragile political situation in the country). Key stakeholders have to understand and agree on most effective RECP policy instruments in country. There is a capacity constraint in the country for developing and integrating RECP policies and their implementation, further capacity building in RECP Policy and RECP policy instruments therefore is needed.
Technology push	Likely	Technology transfer initiatives are driven through various initiatives (e.g. Association Agreement with the European Union, Energy Efficiency Agency), and therefore not critically dependent on the existence and activities of the NCPP-Moldova.
Market push	Likely	Prices for water, energy, and raw materials have been increasing significantly over the past years. Prices for these resources are expected to remain high, and therefor will remain a substantive driver for RECP in the country.
Market pull	Likely	There is an increasing market pull for export-oriented industries and suppliers of goods and services to Moldova subsidiaries of transnational corporation, including the country's association agreement with the European Union.

Project sustainability factors	Likely presence in absence of project in future	Justification and comments	
Current and future benefits	Increasing or declining	Rating	Justification and comments
1. Availability of RECP services ('outputs')	Continuing	Medium	The market for RECP and related services, including under government and international supported programme, appears to have developed through the activities of the NCPP-Moldova. However there is a risk for decline in quality of RECP services if no further training is provided RECP experts on management consulting (including advising industries on access to finance and setting up their own consultancy businesses, and integrating and implementation of RECP related policies. Furthermore, there is a need to institutionalise the RECP trainings by either certification of RECP trainings or licensing RECP experts by national authorities.
2. Productivity and environmental benefits ('outcomes')	Expanding	High	<ul style="list-style-type: none"> • It is extremely likely that RECP options that have already been implemented will be continued given their reported environmental and economic benefits. • Further improvements in framework conditions and critical mass are likely to increase the number of businesses considering RECP, so that productivity and environmental benefits can expand over time. • From the RECP assessment reports and communications with the enterprises it is clear that more identified environmental and economic savings can be achieved subject to access to RECP related financing schemes with more favourable interest ratings and lending conditions.

Project sustainability factors	Likely presence in absence of project in future	Justification and comments	
3. Catalyst for sustainable industrial development ('impact')	Continuing	Medium	<ul style="list-style-type: none"> • A fair impact has been achieved to date in regards to fostering the broader sustainable industrial development agenda in the country, also due to strict focus of NCPP-Moldova in three priority sectors. • Compared to other RECP projects in the region, a substantial impact in understanding and behaviour changing of enterprises towards RECP has been achieved. The three priority sectors of the project will likely serve as a platform for further fostering sustainable industrial development in the country. • The current phase of NCPP-Moldova has achieved solid results, and more work is needed to catalyze sustainable and industrial development in the country.

5.6 Project coordination and management

The score card for "Project coordination and management" is presented in Table 11. It demonstrates the following:

- Operationally, the project was generally well managed. UNIDO was responsive to the needs of beneficiaries. Considering the sometimes difficult external circumstances (e.g. fragile political situation and local context, overall lack of trust between industry and government stakeholders, perceived divide and cultural differences between "young and senior generation" in the country), UNIDO generally delivered its support timely and in good quality.
- UNIDO's contractual and administrative procedures and requirements have been perceived as constraining to the efficient implementation of the Project. Delays made it difficult to hire short-term consultants. The hiring constraints were most evident in work stream 2 for the national trainee experts to undertake the RECP assessments at enterprise level. For work stream 3 the Project did only succeed in identifying appropriately qualified consultants after multiple and extensive recruitment attempts. The hiring of these consultants went relatively smooth.
- In the views of the evaluators, the project was delivered by an effective, committed and qualified team. Project outputs produced as part of the project were generally of high quality indicating that quality control was performed as throughout the project. Sample of communication records (e.g. NEB minutes and supporting correspondence) reviewed indicate that project communications was undertaken in a professional manner.
- The monitoring of environmental and economic savings identified and implemented by the enterprises and public institutions are satisfactory and appear to conform

with the UNIDO/UNEP primer on enterprise-level indicators for resource efficiency and pollution intensity.

- As the long term plan for independent operation of NCPP Moldova is still under development, organization and governance as per the UNIDO/UNEP good practice primer for RECP service providers will be done. An indicative and qualitative review against these good practices is provided in Section 6.2 of this evaluation report.
- Although the operation of the NEB set-up had its challenges (e.g. changing representation of members, different stakeholder views on the project activities and outputs), the NEB played a key role in the successful guidance and implementation of the project.
- The project is perceived to achieve good synergies with other activities and projects coordination through UNIDO and other international organizations (e.g. EaP green, low carbon technologies to green the industry, GEF National Energy efficiency fund). However, there is potential to further strengthen and develop synergies with national stakeholders and programs. For example, (1) the recognition of the trained RECP expert by either certification of RECP trainings or licensing RECP experts by national authorities and (2) the integration and implementation of RECP related policies and strategies in the country.

Table 11: Assessment score card for “Project coordination and management”

Project management elements	Rating	Justification and comments
Administration and mobilization of resources and inputs by the partner organizations	Low	<ul style="list-style-type: none"> • UNIDO’s contractual and administrative procedures and requirements have been perceived as a constraining factor to the efficient implementation of the project. • The Project faced challenges (and some delays as a result) with finding and mobilising qualified and experienced national experts to support specific project activities, in particular in work stream 2 (RECP implementation). • It is acknowledged that some delays were outside the control of the Project, including procurement and custom clearances of portable energy and water monitoring instruments to support the RECP assessments and larger than expected effort needed for collection and assessment of post implementation benefits at enterprise level.
Project management, coordination and quality control	High	<ul style="list-style-type: none"> • In the views of the evaluators, the project was delivered by an effective, committed and qualified core team. • Project outputs produced as part of the project were generally of high quality indicating quality control was performed as throughout the project. • Sample of communication records (e.g. NEB minutes and supporting correspondence) reviewed indicate that Project communications was undertaken in a professional manner. • Overall, the progress and annual reports are considered of good quality and comprehensive on reporting of results, progress and challenges experienced in the subsequent years.

Project management elements	Rating	Justification and comments
Monitoring and self-evaluation	<p>High (implementation on RECP options)</p> <p>Medium (NCCP-Moldova)</p>	<ul style="list-style-type: none"> • A set of three indicators on resource productivity and three indicators on pollution intensity have been used to monitor the identified and post implementation benefits achieved by enterprises/organizations that were assisted as part of the project. • The NCCP-Moldova adopted the global frameworks developed under the UNIDO-UNEP RECP Programme to monitor enterprise level resource productivity and environmental benefits³⁷. • The National executive board played a key role in the successful guidance and implementation of the project. • The long term action for independent operation of NCCP Moldova with appropriate institutional and legal legitimacy is currently under development. The project faced delays in the development of this action plan due to difficulties to find suitable national experts.
Operation of National executive board	High	<ul style="list-style-type: none"> • Although the operation of the NEB had its challenges, the NEB played a key role in the successful guidance and implementation of the project.
Synergy benefits with other projects	Medium	<ul style="list-style-type: none"> • Delivery of the project through UNIDO allowed the project to benefit from international expertise and methodologies, and create effective synergies with parallel projects. • The project is perceived to achieve good synergies with other activities and projects coordination through UNIDO and other international organizations (e.g. EaP Green, low carbon technologies to green the industry, GEF National energy efficiency fund). • There is potential to further strengthen and develop synergies with national stakeholders. For example, (1) the recognition of the trained RECP expert by either certification of RECP trainings or licensing RECP experts by national authorities and (2) the integration and implementation of RECP related policies and strategies in the country.

³⁷ Enterprise-Level Indicators for Resource Efficiency and Pollution Intensity: a primer for small and medium sized enterprises, UNIDO/UNEP (2010).

5.7 Other aspects

Table 12 presents the score card for “Other aspects”. It demonstrates that both gender mainstreaming and procurement as rated as satisfactory for the project.

Table 12: Assessment score card for “Other aspects”

	rating	Justification and comments
Gender mainstreaming	Medium	<ul style="list-style-type: none"> • A formal approach to gender equality or an analysis of the gender situation in Moldovan industries was not applied as part of the project. It was reported that a pragmatic and gender sensitive approach to gender mainstreaming was applied to relevant project activities (e.g. training, recruitment). • Participation of females in NCPP-Moldova activities, including training/capacity building is reported by the project team to be between 35-40%. • The UNIDO gender strategy was finalized in March 2015. Due to the timing, this strategy could not be applied to the current phase of the NCPP-Moldova.
Procurement	Medium	<ul style="list-style-type: none"> • Even though the NCPP-Moldova is showing sound progress towards the achievement of its expected results, delays have been incurred, in terms of undertaking the activities and as a result thereof also in the disbursement of financial resources. • Different procurement factors have contributed to project delays, including administrative, contractual and financial matters (as a result of introduction of new Enterprise resource planning system and associated rules and procedures at UNIDO). • In order to facilitate the execution of RECP assessments a set of portable energy and water monitoring instruments was purchased. Their procurement and custom clearances incurred unfortunate delays resulting in late arrival in July 2013. • The Project faced challenges (and delays as a result) with finding and mobilising qualified and experienced national experts to support specific Project activities, in particular in work stream 3 (RECP policy and strategy). • Based on a review of sample recruitment records and supporting communications, the evaluators rate the recruitment of project staff and short and long-term experts to be fair and confirm UNIDO/UNDP procedure.

5.8. Key strengths and weaknesses of the project

Based on the evidence available to the evaluators from project documentation and interviews with project stakeholders, the key strengths and weaknesses of the project can be summarized in the table below.

Table 13: Key strengths and weaknesses of the project

Key strengths	Key weaknesses
<ul style="list-style-type: none"> • RECP is cross-functional concept of increasing importance to Moldova. RECP is adding value to industry and government stakeholders by addressing increasing resource prices (e.g. energy, water, and raw materials), and increasing international standards and associated development opportunities. Furthermore, RECP drives innovation and the application of fit-for-purpose technologies. • Substantial environmental and economic savings have been identified and a relevant share thereof has been implemented as a result of the project. • NCPP-Moldova has established a substantial community of technical RECP experts and active in RECP promotion in three regions. • Industry-to-regulation/policy (bottom-up) approach applied as part of NCPP-Moldova has been proven to be successful (the RECP Clubs Model). • Increasing understanding of the policy specific situation is being built up in the project to create the necessary basis for the elaboration of the comprehensive policy instruments. 	<ul style="list-style-type: none"> • More identified RECP savings can be achieved if assistance is provided to beneficiary organizations to find and access available financing schemes. However, it is recognized that the investment climate in Moldova difficult at the moment. • The most effective RECP policy instruments to be implemented in the country are still under discussion. Furthermore, there is an ongoing capacity constraint in the country for developing and implementing environmental and industry policy which impacts integrating RECP policies and their implementation. • NCPP has played an important facilitating, piloting and supporting role towards RECP policies and strategies in the country. However, overall policy implementation in the country remains a challenge. • The work on the development of long term action plan for independent operation of NCPP-Moldova is still under development. This work is important to agree and develop an appropriate institutional and legal legitimacy to ensure long-term sustainability of the RECP service provision in the country.

6 Assessment against log frame and NCPP good practices

6.1. Assessment against log frame

Table 14 provides an assessment of the NCPP-Moldova against the project log frame as included in the project document³⁸. The assessment is based on the evidence available to the evaluators and taking into account the common objective of all key stakeholders involved in the project, namely the practical implementation and scaling up of Resource efficient and Cleaner production (RECP) in the Republic of Moldova.

Table 14: Assessment of against key performance indicators from log frame

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
OBJECTIVE			
Programme objective: Improve resource productivity and	1. Environment: reduced environmental footprint of enterprises.	<ul style="list-style-type: none"> Stakeholder interviews held during the field mission show that NCPP-Moldova is providing unique and added value services to private sector companies and public institutions in reducing 	Medium to high

³⁸ Project document “National Cleaner Production Programme (NCPP): Republic of Moldova” (UE/MOL/10/x01), June 2011.

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
<p>environmental performance of enterprises and other organizations in Moldova and thereby contribute to sustainable industrial development and generation of employment and incomes.</p>	<p>2. Production efficiency: increased resource productivity and reduced operational and/or compliance costs of enterprises.</p>	<p>resource use, wastes and pollution.</p> <ul style="list-style-type: none"> • 32 implemented RECP assessments at enterprises (7 detailed assessments, 25 self-assessments through established RECP Clubs). • Implementation monitoring in 7 companies and 25 club members show <ul style="list-style-type: none"> ○ Reported annual environmental savings estimated at 3,015,000 kWh, 148,000 m³ water, 52, 3 tonnes of materials. ○ Reported economic savings estimated at € 290,000 annually (total of € 870,000 over past 3 years). • Monitoring of implementation does not cover yet all participating companies and public institutions so environmental and economic savings are higher than reported above. • 8 detailed RECP assessments are ongoing and 46 enterprises are part of the second/third cycle of RECP Clubs in Causeni, and Ungheni Municipalities. As a spin off from the Project two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises and the RECP club model is replicated to five countries under EaP GREEN. 	<p>Medium to high</p>

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	3. Policy and institutional: conducive policies and regulations implemented and enforced and RECP promoted by strong national custodian.	<ul style="list-style-type: none"> • Piloting of RECP Clubs model in three regions (2013 – 2015) as a RECP policy measure show very promising results for continuation and replication. • NCPP-Moldova contributed to including RECP concept into draft National environmental strategy 2014-2023. • Liaison and engagement with various national and international stakeholders on policy instruments towards implementation of RECP in Moldova, including consultation workshop, policy review study. 	Medium
OUTCOME (PRINCIPLE)			
RECP concepts, methods, practices, technologies and policies implemented by enterprises, government authorities and other	1. RECP activities of enterprises.	<ul style="list-style-type: none"> • 32 implemented RECP assessments at enterprises, covering 7 detailed assessments and 25 self-assessments through Clubs. • 8 ongoing detailed assessments as part of the 2015 training of national experts. • 3 RECP Clubs established in Chisinau, Causeni, Ungheni. 25 enterprises (first cycle) + 46 (current second/third cycle). 	Medium to high

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
OUTCOMES (CONTRIBUTING)			
<p>Outcome 1 - RECP capacity: NCPPP-Moldova delivers value-adding RECP services to enterprises, government organizations and other relevant stakeholders.</p>	<p>1.1. Recognition of NCPPP-Moldova by private and public sectors and civil society.</p>	<ul style="list-style-type: none"> • Public institutions and enterprises involved in food/agribusiness, construction materials and municipal services' sectors show significant recognition of NCPPP Moldova. • Expressions of appreciations received for NCPPP-Moldova activities from third parties (government, industry and professional associations): <ul style="list-style-type: none"> ○ See annex D in the attached Progress report Q1-Q2, 2012. ○ http://mediu.gov.md/index.php/serviciul-de-presa/noutati/938-lansarea-programului-national-de-producere-mai-pura ○ http://mediu.gov.md/index.php/serviciul-de-presa/noutati/2187-ecologizarea-economiei-necesita-crearea-unui-model-de-dezvoltare-care-sa-contribuie-la-reducerea-vulnerabilitatii-la-diferiti-factori-de-risc ○ http://mediu.gov.md/index.php/serviciul-de-presa/noutati/2042-noua-strategie-de-tara-pentru-perioada-2015-2020-in-elaborare-de-catre-agentia-austriaca-de-dezvoltare-prevede-suport-republicii-moldova-in-protectia-mediului ○ http://mediu.gov.md/index.php/serviciul-de-presa/noutati/902-seminar-national-privind-economia-verde ○ http://mediu.gov.md/index.php/serviciul-de-presa/noutati/504-vizita-reprezentantilor-unido-la-ministerul-mediului ○ http://www.crungheni.md/news/?nid=9ccbcb68228f84cf371fda585ebf34c9 http://www.primaria.causeni.org/noutati/499-la-cueni-s-a-constituit-clubul-nu-risipi-.html 	<p>Medium</p>

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
<p>Outcome 2 - RECP Implementation: RECP concepts, methods, practices and technologies have been implemented by enterprises and other organizations in Moldova and their environment, resource use and economic benefits have been monitored and verified</p>	2.1. Reduced waste and pollution intensities of enterprises.	<ul style="list-style-type: none"> • 32 implemented RECP assessments at enterprises (7 detailed assessments, 25 self-assessments through Clubs). • Implementation monitoring in 7 companies and 25 club members show: <ul style="list-style-type: none"> ○ Reported annual environmental savings estimated at 3,015,000 kWh, 148,000 m³ water, 52,3 tonnes of materials. ○ Reported economic savings estimated at € 290,000 annually (total of € 870,000 over past 3 years). • Monitoring of implementation does not cover yet all participating companies and public institutions so environmental and economic savings are higher than reported above. 8 detailed RECP assessments are ongoing and 46 enterprises are part of the second/third cycle of RECP Clubs in Causeni, and Ungheni Municipalities. As a spin off from the Project two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises, and the RECP club model is replicated to five countries under EaP GREEN 	Medium to high
	2.2. Increased resource productivity of enterprises.		Medium to high
	2.3. Reduced operational and compliance costs of enterprises.		Medium to high

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
<p>Outcome 3 - RECP Policy & Strategy: Mechanisms for mainstreaming RECP concepts and policy instruments have been created at suitable administrative levels in relevant policies and regulations in Moldova.</p>	<p>3.1. Increased role for RECP in environmental, industry and other relevant policies at appropriate administrative levels.</p>	<ul style="list-style-type: none"> • Industry-to-regulation/policy (bottom-up) approach applied as part of NCPP Moldova has been proven to be successful. Piloting of RECP Clubs Model in three regions (2013 – 2014) as a RECP policy measure show very promising results for continuation and replication. • NCPP-Moldova contributed to including RECP concept into draft National environmental strategy 2014-2023. • Liaison and engagement with various national and international stakeholders on policy instruments towards implementation of RECP in Moldova, including consultation workshops, policy review study 	<p>Medium</p>
WORKSTREAM 1: RECP CAPACITY			
<p>Output 1.1: NCPP-Moldova set up and operating as per agreed institutional and governance provisions.</p>	<p>1.1.1. Effective guidance and supervision of NCPP-Moldova by National executive board and Advisory forum following good international practices.</p>	<ul style="list-style-type: none"> • In total, ten meetings of the National executive board (NEB) were held throughout the project (e.g. four meetings in 2012, one meeting in 2013, 3 meetings in 2014, two meetings in 2015). • Assessment of extensive sample of minutes and records of supporting communications material confirm that NEB meetings took place and reflected the true situation. Overall quality of communications was good. Evidence received indicates that minutes of NEB meetings were circulated to all key stakeholder organizations. In some cases the supporting materials could have been circulated more timely in advance of the NEB meetings. 	<p>Medium</p>

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	1.1.2. Annual work plan and progress reports on NCPP activities and achievements.	<ul style="list-style-type: none"> Progress and annual reports for the years 2012, 2013, and 2014 were produced by the project team and circulated to the NEB members. Overall, the progress and annual reports are considered of good quality and comprehensive on reporting of results, progress and challenges experienced in the subsequent years. 	High
Output 1.2: Staff and associated experts of NCPP-Moldova trained in basic and advanced RECP methods and applications.	1.2.1. National experts trained in basic RECP assessment methods (target 20 experts).	<ul style="list-style-type: none"> 40 national experts were trained and coached to undertake basic RECP assessments as part NCPP-Moldova in yrs. 2012-2015. Review of selected samples of training materials and attendance records show that trainings took place and reported number of experts was trained. Quality and extensiveness of technical training material reviewed is very good. 	High
	1.2.2. Training delivered on three advanced / associated RECP topics.	<ul style="list-style-type: none"> 22 participants trained on the process monitoring/performance indicators; management systems/continuous improvement; energy efficiency; water efficiency/waste water minimization; techno/economic evaluation. 	Medium to high
Output 1.3: Awareness and understanding of RECP opportunities and benefits improved at the national and regional levels among enterprises, government and civil society.	1.3.1. Internet website and help-desk.	<ul style="list-style-type: none"> The NCPP website was set up and further maintained, and updated during 2012-2015 with relevant materials, and brief announcements of the main events have been posted http://www.ncpp.md/en/evenimente. http://www.ncpp.md/en/ Operation of helpdesk available by accessing: http://www.ncpp.md/en/contacte.html 	High
	1.3.2. Awareness seminars (target 12).	<ul style="list-style-type: none"> 7 awareness RECP raising workshops were organized and facilitated through the project with local and central government, business, academia (around 150 participants in total). 	Medium

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	1.3.3. National conferences (target 2).	<p>NCPP staff delivered presentations at the following national and international conferences:</p> <ul style="list-style-type: none"> • NCPP Launching event (May 2012). http://mediu.gov.md/index.php/serviciul-de-presa/noutati/938-lansarea-programului-national-de-producere-mai-pura. • Regional Conference of the European Roundtable on Sustainable Consumption and Production (15 October 2014, Slovenia). Presentation on achievements during 2010-2014 and lessons learnt from RECP implementation in the Republic of Moldova. https://conferences.matheo.si/conferenceDisplay.py?confId=0 • International Technical Scientific Conference "Energy, Efficiency, Ecology, Educations" (10-11 April 2014, TUM, Moldova). Presentation on RECP benefits at the national level, and contributed an article to the Conference. • Moldova's green development - High level event (8 April 2014). Presentations on RECP achievements in the country and company representatives testified regarding experiences of RECP implementation at food processing sector. http://unimedia.info/stiri/Moldova-va-promova-economia-verde-si-dezvoltarea-durabila-74814.html. • Closure national conference is scheduled for September 2015. 	High

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
WORKSTREAM 2: RECP IMPLEMENTATION			
<p>Output 2.1: Potential for reduction of waste and effluent generation and water use demonstrated in Moldovan enterprises and other organizations.</p>	<p>2.1.1. Implementation of RECP methods and practices in demonstration companies in target sectors (target 30+ 'demonstration' enterprises).</p>	<ul style="list-style-type: none"> • 32 implemented RECP assessments at enterprises (7 detailed assessments, 25 self-assessments through established RECP Clubs). • In progress RECP self-assessments with 46 enterprises (second/third cycle of RECP Clubs, Causeni, Ungheni). • 8 detailed RECP assessments are ongoing • As a spin off from the project two more RECP clubs are established in Balti and Orhei Municipalities with participation of 42 enterprises and the RECP club model is replicated to five countries under EaP GREEN. 	High
	<p>2.1.2. Monitored resource productivity, environment and economic benefits as achieved by participating enterprises.</p>	<ul style="list-style-type: none"> • Implementation monitoring in 7 companies and 25 club members show: <ul style="list-style-type: none"> ○ Reported annual environmental savings estimated at 3,015,000 kWh, 148,000 m³ water, 52,3 tonnes of materials. ○ Reported economic savings estimated at € 290,000 annually (total of € 870,000 over past 3 years). • The monitoring of implementation, as reported here, do not yet cover the results from the RECP self-assessments undertaken with 46 enterprises as part of second/third cycle of RECP Clubs, Causeni, Ungheni, and of 8 ongoing detailed RECP assessments. • As a spin off from the Project - RECP clubs in Balti and Orhei municipalities with participation of 42 enterprises - baseline RECP options identified. 	Medium to high

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	2.1.3. At least five enterprise success stories of RECP implementation per sector (target: 15+ success stories)	<ul style="list-style-type: none"> • Project has completed and published four RECP enterprise success stories to date (e.g. Agrosfera-BM, Doina Vin, Orhei-Vit Causeni, Stauceni Vin). • Success stories are available from: http://www.ncpp.md/en/documente.html. • 10 more success stories are currently in progress. 	Medium
<p>Output 2.2: Mechanisms developed, trialed and installed for regional replication and scaling up of RECP in Moldovan enterprises and other organizations</p>	2.2.1. Regional replication programme developed and delivered in four regions.	<ul style="list-style-type: none"> • Regional replication programme RECP was prepared and delivered in five regions through RECP Clubs which were completed in Chisinau, Ungheni, and Causeni regions, in cooperation with the mayor's offices (plus Balti and Orhei regions ongoing as a spin off). • 25 enterprises successfully completed the first Club cycle with a company specific RECP action plan. • Second/third cycle of RECP clubs in 2 regions initiated (Ungheni and Causeni) with 46 enterprises. • Piloting of RECP Clubs model in three regions (2013 – 2014) as a RECP policy measure show very promising results for continuation and replication. • 28 RECP workshops were held as part of the RECP Clubs in Ungheni, Causeni, Chisinau with an average attendance of 15 participants per workshop, including enterprises, mayors, vice-mayors, public institutions officers. • RECP Clubs established in two additional municipalities as a spin off from the Project (Balti and Orhei) with participation of 42 enterprises. 	High

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	2.2.2. Successful completion of replication programme by at least 60 enterprises.	<ul style="list-style-type: none"> • 111 enterprises will have completed a RECP self-assessment as part of the current phase of the NCPP-Moldova. Completed RECP self-assessments with 25 enterprises (first cycle of RECP Clubs in Chisinau, Causeni, Ungheni). • In progress RECP self-assessments with 46 enterprises (second cycle of RECP Clubs in Causeni and Ungheni). • RECP clubs established in two additional municipalities as spin off from Project (Balti and Orhei) with participation of 42 enterprises, and RECP club model replicated to five other countries in region under EaP GREEN programme. 	High
	2.2.3. Monitored resource productivity, environment and economic benefits of participating enterprises.	<ul style="list-style-type: none"> • Implementation monitoring in 7 companies and 25 club members to date • Monitoring of implementation is based on UNIDO/UNEP (2010) "Enterprise Level Indicators for Resource productivity and pollution intensity: a primer for small and medium enterprises". • The monitoring of implementation do not yet cover the results from the RECP self-assessments being undertaken with 46 enterprises as part of second/third cycle of RECP Clubs in Causeni, Ungheni. 	Medium to high
	2.2.4. Booklet on RECP successes for each participating region.	<ul style="list-style-type: none"> • Customized guideline on RECP replication through Regional RECP Clubs Model (2013). • Customized guideline on RECP assessments in public buildings in Moldova (2013) (which was used for 24 assessments in public buildings). • www.ncpp.md/docs/Ghid de Eficientizare a Resurselor in In stitutii Publice.pdf • www.ncpp.md/docs/ENG RECP results 2012-2014.pdf • www.ncpp.md/docs/RECP CLUBS Flyer Ro.pdf • www.ncpp.md/docs/RECP CLUBS Flyer En.pdf 	Medium

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
<p>Output 2.3: Pilot projects for adaptation and adoption of innovative RECP technologies developed, evaluated and promoted for investment and implementation.</p>	<p>2.3.1. Appropriate key RECP technologies identified for target sectors.</p> <p>2.3.2. Formulation and promotion of technology pilot projects, including detailed feasibility and investment analysis (target 15+ enterprises).</p>	<ul style="list-style-type: none"> • RECP investments for two buildings successfully promoted for funding and funded under National Energy Efficiency fund. • No specific RECP technology needs were identified in enterprise audits that would require technology pilots. • This task is further aligned with the support under the EaP GREEN Programme. NCCP-Moldova is being used as a platform for launching complementary RECP pilot projects. 	<p>Medium</p>
WORKSTREAM 3: RECP POLICY AND STRATEGY			
<p>Output 3.1: Policy assessment</p>	<p>3.1.1. Policy gap assessment report.</p>	<ul style="list-style-type: none"> • Policy gap assessment produced by Thomas Lindhqvist, Lund University (2013), including supporting consultation. 	<p>High</p>

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
carried out and RECP strategy formulated.	3.1.2. Proposed RECP strategy.	<ul style="list-style-type: none"> • Consideration of proposals to include RECP concept to National environmental strategy 2014- 2023, resulted in inclusion of RECP in 2014-2023 National environment strategy. • Draft “Roadmap on RECP Strategy” for the Republic of Moldova (June 2015). • Initiation and development of the renewed National declaration on RECP Promotion. • There is emerging consensus that a separate National RECP strategy is not supported by key stakeholders. However, the most effective RECP policy instruments to be implemented in the country are still under discussion. These discussions have been a resource and time consuming process. • It is the view of the evaluators that the responsibility for the development and integration of RECP related policies and strategies should lie with the relevant government authorities. NCPP-Moldova played a supporting, facilitating, and piloting role towards RECP policies in the country. 	Medium
	3.1.3. Records of stakeholder consultations and endorsement.	<ul style="list-style-type: none"> • Records of liaison and engagement with various national and international stakeholders on policy instruments towards implementation of RECP in Moldova, including policy gap assessment (November 2012), consultation workshop (March 2015), policy briefing (June 2015). • Coordination of multi-stakeholder process to adopt the renewed National declaration on RECP promotion (work in progress). 	Medium
Output 3.2: National action plan for RECP developed inclusive of appropriate implementation mechanisms.	3.2.1. National RECP action plan developed and promoted.	<ul style="list-style-type: none"> • Discussion document “Strategic priorities for RECP implementation in the Republic of Moldova” (March 2015). • Draft “Roadmap on RECP Strategy” for the Republic of Moldova (June 2015). • Initiation and development of the renewed National declaration on RECP promotion. 	Medium

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
	3.2.2. Policy makers trained.	<ul style="list-style-type: none"> • Study tour of NEB members to Austria to learn from RECP policy instruments, including the concept of RECP Clubs (Nov-Dec 2012). • Material and supporting communications for RECP policy briefing session (June 2015). A total of 49 people received training and briefing sessions on RECP policies as part of the Project. • As part of a potential next phase of the NCPP-Moldova there is a need to expand capacity building to government decision makers and supporting policy experts on RECP policy implementation and integration. 	Medium
<p>Output 3.3: Implementation and enforcement capacity of government for RECP-related policy and legislation enhanced.</p>	3.3.1. Implementation pilots undertaken with key policy instruments.	<ul style="list-style-type: none"> • Piloting of RECP Clubs Model in three regions (2013 – 2014) as a RECP policy measure. This industry-to-regulation/policy approach has been proven to be successful. The established RECP clubs are perceived as an efficient platform to implement and upscale RECP throughout the country. • The RECP Clubs are built upon several success factors for replication, including the involvement of regional communities, creation of so-called “industry champions”, trust building between local stakeholders, hands-on information sharing and problem solving, and creating platforms for tackling collective opportunities and challenges in the regions. • The RECP Club Model should be considered by government agencies as an implementation mechanism in existing policy instruments in the country. • The RECP Clubs do not have a legal status yet. Further efforts are required to scale up these clubs by piloting different business models, and their feasibility should be assessed to develop self-sustaining RECP Clubs. 	Medium

Narrative summary	Key performance indicators	Project delivery against performance indicators - as per 30 June 2015	Performance rating
Output 3.4: Institutional framework for sustained RECP advocacy and RECP service delivery established.	3.4.1. Agreement on appropriate institutional set up and possibly legal entity for NCPP-Moldova.	<ul style="list-style-type: none"> This task is still under development and undertaken by contracted experts in the period July to September 2015. 	Not sufficient information available to evaluators to assess quality and appropriateness.
	3.4.2. Business and operational plans for continued operation of NCPP-Moldova.	<ul style="list-style-type: none"> This task is still under development and undertaken by contracted experts in the period July to September 2015. 	

6.2. Key good practice elements for RECP service providers

The collective experience of the National Cleaner Production Centres (NCPCs) established and supported by UNEP and UNIDO highlighted the critical importance of management, organization and governance in terms of the long term success of the programmes and independence and institutional sustainability of a RECP service provider. Good practices were reviewed and put together in a practical primer that assists new and existing centres in their institutional and professional development to become nationally-directed institutions that are supported by key stakeholders from government, business sector and civil society, and that deliver value-adding RECP services that are sought after by SMEs (UNEP/UNIDO, 2010).

Table 15 provides a qualitative assessment of the current status of the NCPP-Moldova against the key elements for providers of services in Resource efficient and Cleaner production based on UNEP/UNIDO (2010).

It is noted and recognized that the RECP service provision in Moldova is in its early development stages, and that the development of mature and independent RECP service provider requires a long-term commitment and engagement with key stakeholders in industry, government and society.

Table 15: Assessment against key elements for providers of services in resource efficient and cleaner production (UNEP/UNIDO, 2010)³⁹

Key elements and assessment questions	Assessment against key factors by evaluators
Strategy	
1. Does NCPC have an approved vision and mission that maximize stakeholder benefit?	NCCP-Moldova is so far guided by objectives and logframe outlined in the Project document developed and approved by key stakeholders in 2011. Updated vision and mission should be formulated as part of the finalization of the current phase in preparation for a potential next phase.
2. Have the viewpoints and inputs of key stakeholders been taken into account during the development of the strategy?	Viewpoints and inputs from key stakeholders have been taken into account into project document for objectives and activities of current phase of NCCP-Moldova. A renewed round of stakeholder consultation should take place to develop a potential next phase of NCCP-Moldova and institutionalization of a RECP service provider in the country.
3. To which extent does the board review the annual performance of the NCPC in relation to its agreed strategic objectives?	NCCP-Moldova is guided by the National executive board in terms of performance and strategic objectives. It is strongly recommended to keep the operation of the NEB as part of a potential next phase to support the further institutionalization and implementation of RECP

³⁹ Good Organization, Management and Governance Practices: a primer for providers of services in resource efficient and cleaner production, UNIDO/UNEP, Vienna/Paris, Austria/France (2010).

Key elements and assessment questions	Assessment against key factors by evaluators
	in the country.
4. Is there a productive working partnership between the NCPC director and the board?	The partnership with the National executive board has been productive. This operation of the NEB was sometimes challenging partly due to current fragile national context, different personalities and objectives, and changing representations of NEB member organizations over the past years.
5. Are roles, responsibilities and accountability for all relevant levels of management and board members defined, documented and understood?	The roles and responsibilities of the NEB are outlined in the NCPP-Moldova project document of the current phase. Roles, responsibilities and accountability of NEB should be discussed as part of a potential next phase of NCPP-Moldova and institutionalization of a RECP service provider in Moldova.
Autonomy	
1. Does NCPC have its own legal status (including - as appropriate - statutes, articles and bylaws)?	No, NCPP-Moldova is not a legal entity yet. As per the project document, the current phase of the NCPP-Moldova is run as a project with the host institution providing support services, and thereby be acting as a de facto project management unit for UNIDO.
2. Can NCPC enter into contracts for service delivery and can NCPC freely manage the funds obtained?	No. As per statement above
3. Can NCPC hire and appoint its own staff and make legal working contracts?	No. As per statement above
4. To which extent can NCPC enter into partnerships with other organizations in order to foster its own operations?	Through UNIDO, the NCPP-Moldova is already in partnership and collaborating with various other projects (e.g. EaP Green, RECP-net, Low carbon technologies to green the Industry).
5. To which extent have NCPC set procedures to avoid conflict of interest between your NCPC operations and members of the Board or staff of the NCPC?	Outside scope of this evaluation, and therefore not assessed in this report.
Operational management	
1. Has a work plan been established with target performance indicators for NCPC operations and are these known and understood by your staff?	Annual work plans have been prepared and included in the annual progress reports produced to date. Work plans and progress reports were discussed and/or circulated to NEB members.
2. To what extent does NCPC develop appropriate job descriptions and to which	As part of current phase, recruitment of staff followed UNIDO procedures including job descriptions.

Key elements and assessment questions	Assessment against key factors by evaluators
extent is each of NCPC staff members aware of his or her specific duties and responsibilities?	
3. To what extent is staff able to produce relevant information in a timely manner?	Overall satisfactory performance, see evaluation against the project's logical framework (Section 6.1).
4. To what extent does NCPC reward good practice and give staff the time and opportunity to share their learnings?	Outside scope of this evaluation, and therefore not assessed in this report.
5. To what extent do members of NCPC staff participate in management of the NCPC (e.g. work planning and review etc.)?	Current phase of NCPP-Moldova is managed by National programme director (Lucia Sop) and Project manager (Rene van Berkel). Contracted national and international experts focus on delivery of specific outcomes and outputs.
Business	
1. Does NCPC allocate staff time for prospecting and other business development activities (e.g. following tenders and calls of bidders)?	Outside scope of this evaluation, and therefore not assessed in this report.
2. Are NCPC operations breaking even through incomes from clients?	NCPP-Moldova is not a legal entity yet. As per the project document, the current phase of the NCPP-Moldova is run as a project with the host institution providing support services, and thereby be acting as a de facto project management unit for UNIDO.
3. To which extent has NCPC developed standardized RECP service modules and developed new RECP-related services?	As part of current phase, NCPP-Moldova developed customized RECP service modules for on-site RECP assessments for public buildings and companies, and a replication guide for RECP Clubs.
4. Does NCPC service model have a good balance between training, information and advisory services to enterprises, governments and other possible client groups	Current phase provided an overall good balance of training, information, and advisory services to companies and public institutions. Suggestions on RECP services for a potential next phase are presented in Section 9 of this evaluation report.
5. Does NCPC have an active approach to networking and advocacy?	A pro-active approach to networking and advocacy was provided to companies and public institutions as part of current phase of Moldova-NCPP. Suggestions on RECP networking and advocacy as part of a potential next phase are presented in Section 9 of this evaluation report
Expertise	
1. Does NCPC give knowledge management priority within its	Outside scope of this evaluation, and therefore not assessed in this report.

Key elements and assessment questions	Assessment against key factors by evaluators
operations?	
2. Does NCPC specifically assign its staff to knowledge management activities?	Outside scope of this evaluation, and therefore not assessed in this report.
3. Does NCPC have a system in place for sharing knowledge within its NCPC?	Outside scope of this evaluation, and therefore not assessed in this report.
4. To which extent does NCPC rely on face-to-face/paper methods for managing and sharing the knowledge of the centre?	Outside scope of this evaluation, and therefore not assessed in this report.
5. To which extent does NCPC rely on online tools for managing and sharing the knowledge of centre?	Outside scope of this evaluation, and therefore not assessed in this report.

7 Key findings

Based on the assessments discussed in previous chapters, the key findings of the evaluation are as follows:

NCPP-Moldova delivers value-adding RECP services to enterprises, government organizations and society.

- Private sector companies and public institutions involved in food/agribusiness, construction materials and municipal services' sectors show significant recognition of NCPP-Moldova.
- Substantial community of technical RECP experts has been created and are active in RECP promotion in three regions.

RECP concepts, methods, practices and technologies have been implemented by enterprises and other organizations in Moldova and their environment, resource use and economic benefits have been monitored and verified.

- Implementation monitoring in 7 companies and 25 club members participating in the project show that substantial environmental savings have been identified and implemented as a result of the project. Reported annual environmental savings estimated at 3,015,000 kWh, 148,000 m³ water, 52.3 tons of materials. Furthermore, 24 RECP assessments carried out with public institutions identified over annual electricity savings of up to 21,000,000 kWh and 4,400 kt of CO₂ savings. Reported implemented economic savings are estimated at € 290,000 annually (estimated to be over € 870,000 over past 3 years).
- Current monitoring of RECP implementation does not cover yet all participating companies and public institutions so economic and environmental savings are higher than reported above. The monitoring of implementation, as reported here, do not yet cover the results from ongoing 8 full scale assessments and the RECP self-assessments undertaken with 46 enterprises as part of second/third cycle of RECP Clubs in Causeni, and Ungheni Municipalities, so environmental and economic savings at the end of the current phase will be higher than reported above. Moreover RECP clubs are established in two additional municipalities in Moldova as spin off from project (Balti and Orhei Municipalities) with participation of 42 enterprises, and RECP club model replicated to five other countries in region under EaP GREEN programme⁴⁰.
- Given the total project budget of € 500,000, the savings achieved through the Project show a substantial return on investment, also taken into account that the Project delivered a range of other RECP services and promotions.

In addition to technical capacity building, there is a need to further build capacity of the established pool of RECP experts on management consulting, including and setting up their own consultancy businesses and advising organizations on access to finance.

⁴⁰ <http://www.unido.org/eapgreen.html>

- From the RECP assessment reports produced by the Project and communications with the enterprises it is clear that more of the identified environmental and economic savings can be achieved if support is provided to access available financing and funding schemes (which may have more favorable interest ratings and lending conditions). The National energy efficiency fund is an example of such funding scheme.
- There seems significant industry demand and potential for the delivery of a full RECP package of technical and access to finance solutions through new business ventures. It is therefore important that the pool of technical experts are further trained in offering access to finance solutions and supported with business development skills to set up their own RECP service consultancies.

Although overall policy implementation in the country is a challenge, progress towards mainstreaming RECP concepts through policy instruments has been made.

- The industry-to-regulation/policy approach applied as part of NCPP-Moldova (the established RECP Club model) has been proven to be successful. The learnings from this approach should be used to replicate the model to other regions and inform the optimization of existing policy instruments in the country.
- There is emerging consensus that a separate National RECP strategy is not supported by key stakeholders. However, the most effective RECP policy instruments to be implemented in the country are still under discussion. Key stakeholders still have to agree on the most effective top-down RECP policy instruments in country.
- One of the underpinning root-causes is that there is a capacity constraint at governmental institutions and at country level in general. More capacity building to decision makers and supporting RECP experts on developing and integrating RECP policies and their implementation in Moldova is therefore required.

The results achieved at company and public institution level are likely to be sustainable. The sustainability of the broader project outcomes will depend on the institutionalization of RECP related activities in the country, including the completion of a long term plan for the RECP service provision.

- Considering that the substantial environmental and economic savings achieved with the enterprises and public institutions are a result of implementing low(er) cost RECP measures, the benefits achieved seem to be sustainable.
- The sustainability of broader project objectives at the national level (wide and successful application of RECP in Moldova, resulting in significant long-term environmental and economic benefits) requires strong service providers that are able to support the implementation of RECP methods, practices and technologies with key stakeholders in industries and government.
- There is a need for further institutionalizing the project outcomes with other RECP related initiatives and programs in the country and internationally. One example is the recognition of the RECP expertise by either formal certification of RECP trainings or licensing RECP experts by national authorities.
- Although the set-up arrangement and operation of the National executive board was successful, capacity constraints, decision makers' cultural and country context issues remain. The NEB played a key role in the successful guidance and implementation of the project, and starting the process to institutionalize RECP in the country.

- The evaluators note the importance to complete the assessment of most appropriate long term plan for NCPP-Moldova, and the required institutional set up and legal entity and supporting business and operational plans. This task is being undertaken by contracted experts in the period July to September 2015.

The important “enabling role” of the NCPP-Moldova should be recognized and this should be the basis for stakeholder discussions on the future work of the NCPP in the country and the region.

- The key strengths of the NCPP-Moldova are on providing a leading role on bottom-up RECP approaches in the country, including RECP capacity building, demonstration of RECP improvements in enterprises/public institutions, and facilitating multi-stakeholder engagement.
- It is the view of the evaluators that responsibility for development and integration of RECP related policies and strategies should lie with the relevant government authorities. The NCPP-Moldova should provide a fostering role (e.g. facilitate, pilots, support) role in this process. One practical example where NCPP-Moldova can act as a facilitator in the policy making is the current NCPP initiative to renew and adopt the National declaration on RECP Promotion by key government, industry and society stakeholders.

Outputs produced as part of the project were generally of high quality.

- A cross-validation confirmed the accuracy of data reported to the National executive board. The progress and annual reports are considered of sufficient quality and comprehensive on reporting of results, progress and challenges experienced in the subsequent years.
- The quality of outputs produced by the project for beneficiary companies and public institutions (e.g. RECP assessment reports, success stories, media articles, website) are of good quality, comprehensive and written towards their target audience.

8 Recommendations

Based on the evaluation findings outlined in this report, this chapter outlines the recommendations for UNIDO, relevant government agencies, counterpart organizations, and donor organizations.

5.9. Recommendations for UNIDO

UNIDO to re-focus its efforts on institutionalizing and synergizing RECP activities in the country, including the completion of a long term action plan for the RECP service provision in the country and restructuring the current draft of RECP policy roadmap being developed through the Project as an action oriented document rather than a regulatory document.

One key element of this recommendation is for UNIDO and Project team to restructure the final version of the RECP policy roadmap (developed as part of the Project work stream 3) in a manner that ensures cross-sectoral engagement (e.g. economy, environment, finance), synergize between existing plans, and implementation of RECP agenda in Moldova – a document that is action oriented towards the facilitation of RECP implementation - adopted by the joint decisions of the relevant ministries (Ministry of Economy, Ministry of Environment) rather than a regulatory one. This includes the process already started by UNIDO to renew and adopt the National Declaration on RECP Promotion by key government, industry and society stakeholders. Furthermore and without delay, it is recommended for UNIDO to complete a long term plan for the RECP service provision and the necessary institutional set up and legal entity, including business and operational plans for independent operation of a service providing entity (follow up from NCPP-Moldova).

Two additional suggestions to advance the RECP institutionalizing and synergizing process include:

- UNIDO to develop a clear strategy on how the NCPP-Moldova could support the government to implement specific elements of the EU-Moldova Association agreement. This should include the positioning of the NCPP-Moldova as a partner for the international donor community.
- UNIDO to investigate options to recognize the RECP expertise developed through NCPP-Moldova by either certification of RECP trainings or licensing RECP experts by national authorities.

UNIDO to further develop NCPP-Moldova as an “enabler” for the implementation and scaling up of RECP in the country, meaning a leading role on RECP capacity building and demonstration, and fostering role (e.g. facilitate, pilots, support) in the development and integration of RECP related policy instruments.

The evaluators are of the opinion that the responsibility for development and integration of RECP related policies and strategies should lie with the relevant government authorities. The NCPP-Moldova is best positioned to support the development and integration of RECP related policy instruments and facilitating multi-stakeholder engagement on RECP policy related topics. This includes contributing to sector or topic specific policy instruments and mechanisms in RECP (e.g. green loans, certification programs, fiscal benefits). NCPP-Moldova can contribute to these specific policy instruments by sharing the learnings from the implementation of the practical RECP experiences in enterprises and public institutions.

UNIDO to expand capacity building to (1) government decision makers and supporting policy experts, and (2) technical RECP experts to deliver extended package of RECP services to companies and public institutions.

The capacity building for government decision makers and supporting experts should focus on developing and integrating RECP policies and their implementation in Moldova. The increased capacity building to RECP experts should focus on management consulting, including advising industries on available options for access to finance) and setting up their own consultancy businesses on RECP related or specialized topics (e.g. renewable energy, water efficiency, waste management).

UNIDO to expand the RECP Club concept to other regions and formalize country wide network of RECP Clubs, and pilot different innovative business models for operating RECP clubs to operate independently and sustainability.

The RECP Club concept has proven to be an effective and efficient industry-to-regulation/policy (bottom-up) approach for the implementation of the RECP related policies. The spread of the RECP services across the regions through RECP Clubs provides a solid learning ground for the integration and implementation of RECP related policies. Different business models to operate the RECP Clubs seem to be possible (e.g. membership fee for participating companies after they achieved economic benefits), and their feasibility should be assessed to develop self-sustaining RECP Clubs.

5.10. Recommendations for government and counterpart organizations

Key government, industry and society stakeholders (e.g. Ministry of environment, ministry of economy, environmental and economic focused NGOs, international companies operating in Moldova) to adopt the renewed National Declaration on RECP Promotion coordinated through NCPP-Moldova.

The process to seek adaptation of the renewed National declaration on RECP is facilitated by NCPP-Moldova. With this recommendation the evaluators acknowledge the importance of this process to re-confirm the commitment of government, industry and societal stakeholders to RECP and to capitalize on the opportunities offered by RECP for the country (e.g. addressing increasing price of energy/water/materials, increasing international standards and associated development opportunities, and drive innovation and fit-for-purpose technologies).

Rather than developing a separate and new National RECP Strategy, it is recommended that government agencies in Moldova incorporate relevant RECP concepts into already existing policy instruments and ensure their implementation.

Throughout the duration of the project, this integration process has already started. For example, the Ministry of environment has incorporated the RECP concept into the National environmental management strategy. The successful RECP Club Model (as the industry-to-regulation/policy approach applied as part of NCPP-Moldova) should be considered for integration into existing policies which are linked to resource efficient and cleaner production.

Ministry of environment, Ministry of economy, Chamber of commerce and industry, Academy of sciences, current member companies and Austrian development agency to continue the National executive board (NEB) after end of the project.

The project partnership with the National executive board has been productive. It is acknowledged that the operation of the NEB was sometimes challenging partly due to

current fragile national context, different personalities and personal/professional objectives, and changing representations of NEB member organizations over the past years. However, the NEB is regarded as a key instrument to guide and assist strategic decision making on the further development, implementation, and scaling up of RECP in Moldova.

Government agencies, NGOs and industry stakeholders to continue active participation with and multi-stakeholder dialogues through the NCPP-Moldova.

It is recognized that these engagement processes can be challenging and time consuming, but are key to the long-term success and sustainability of RECP initiatives in any country. Multi-stakeholder dialogues should be geared towards the common goal of all Project stakeholders to further implement and scale up RECP in Moldova. The objectives and drivers for individual organizations should be recognized and where possible and appropriate be integrated into multi-stakeholder engagement processes.

5.11. Recommendations for donor

Austria (through its Ministry for Europe, Integration and Foreign Affairs, BMEIA) to consider continuing the support to the NCPP-Moldova as part of a potential next phase with key stakeholders in industry, government, and NGOs.

The NCPP-Moldova is providing unique and added value services to private sector companies and public institutions in reducing resource use (water, materials, energy), wastes and pollution. The RECP policy related outputs have played a complementary and fostering role at the national level. The project demonstrates satisfactory to high satisfactory performance against the project's logical framework. In the view of the evaluators, the work of the NCPP-Moldova should be continued with key stakeholders in industry, government, and NGOs through a next phase.

9 Possible next phase

As outlined in previous chapters, NCPP-Moldova delivers value-adding RECP services to enterprises, government organizations and society. The work of the NCPP-Moldova is recommended to continue in close collaboration with key stakeholders in industry, government, and NGOs.

This chapter suggest, based on the present evaluation, potential focus areas and activities which could be put forward for a possible next phase. It is noted that, of course, these suggestions are subject to further review and discussions with relevant stakeholders.

a. Focus areas and activities

The suggested focus areas for a potential next phase of the NCPP-Moldova are based on intention to further develop NCPP-Moldova as an “enabler” for implementation and scaling up of RECP in the country. This means a leading role on RECP capacity building, demonstration of RECP improvements in enterprises/public institutions, and a fostering role for top-down RECP policies and strategies in the country.

Based on the findings and stakeholder interviews undertaken as part of this evaluation, the following focus areas and enabling functions are proposed for a potential next phase of the NCPP-Moldova:

- a) **Institutionalize RECP service provision in a legal entity**, (possibly as a National cleaner production centre, Centre for resource efficient and cleaner production Moldova or otherwise), taking consideration of international good practice elements for governance, management and organization of RECP service providers (/UNIDO/UNEP, 2010)⁴¹.
- b) **Facilitate multi-stakeholder engagement towards institutionalization of RECP related policies** in the country, including a facilitating, piloting, supporting role to the integration and implementation of RECP related policies and strategies.
- c) **Continue practical support to RECP implementation** in industries, enterprises and public institutions through the further development of **established RECP clubs** in three regions (e.g. Chisinau, Causeni, Ungheni), and **support their replication to other regions** in the country and internationally.
- d) **Expand capacity building** to (1) government decision makers and supporting experts on developing and integrating RECP policies and their implementation in Moldova, (2) RECP experts to deliver extended package of RECP services to companies and public institutions including access to finance and business case development, and (3) curriculum of engineering training courses to incorporating RECP concepts.
- e) **Support the incubation of new consultancies offering a portfolio of RECP services** to private and public clients tapping into industry demand and substantial community of technical RECP experts created in RECP promotion.

⁴¹ Good Organization, Management and Governance Practices: a primer for providers of services in resource efficient and cleaner production, UNIDO/UNEP, Vienna/Paris, Austria/France (2010).

- f) **Continue the monitoring of RECP implementation in companies and public institutions and disseminate RECP achievements and success stories to:**
 (1) demonstrate the added-value and relevance of the RECP concept to key stakeholders, (2) support decision making on RECP related initiatives in the country, and
 (3) provide the basis for promoting and disseminating RECP successes in Moldova.
- g) **Assist stakeholders to create synergies with parallel RECP related initiatives** nationally (e.g. Energy Efficiency Fund) and internationally (e.g. EaP Green, Association Agreement with the European Union).

b. Outcomes and outputs

Building upon the proposed focus areas and activities in section a, a potential next phase for NCPP-Moldova could focus on delivering the following outputs and outcomes to business, government, and society.

It is noted that the outcomes and outputs specified below are qualitative. Quantification of the outcomes should be undertaken as part of the development process for a potential new phase of the NCPP-Moldova.

Business	<ul style="list-style-type: none"> Increased resource productivity and reduced operational and/or compliance costs of enterprises. Expanded network of RECP Clubs operating in various regional communities throughout the country. Expanded network of experts delivering full packages of RECP services to companies (e.g. technical advices, access to finance, and business case development).
Business and government	<ul style="list-style-type: none"> Created synergies with parallel RECP related initiatives nationally (e.g. Energy Efficiency Fund) and internationally (e.g. EaP Green, Association Agreement with the European Union). Expanded and updated set of RECP success stories, booklets and promotional materials customized to specific target audiences.
Government	<ul style="list-style-type: none"> Input and advice on a needs basis and multi-stakeholder engagement to support the integration and implementation of RECP related policies and strategies in the country. Substantial group of government decision makers in relevant government agencies and supporting experts trained on the integration and implementation of RECP related policies and strategies.
Society	<ul style="list-style-type: none"> Reduced environmental footprint and pollution of enterprises and thereby better living conditions. Job creation through the establishment of new RECP service consultancies.
All	<ul style="list-style-type: none"> Increased awareness among business, government, NGOs, society of the importance of RECP as a concept to address increasing resource prices, meet increasing international standards and associated development opportunities, and drive innovation and fit-for-purpose technologies. Long-term behavior change towards the implementation and

scaling up of RECP in the Republic of Moldova.

- NCPP-Moldova operating as an independent and sustainable legal entity providing support to and being supported by key stakeholders in industry, government, and society.
-

c. Budget and duration

The required budget to undertake to deliver the proposed outcomes are subject to detailed fee calculations which are outside the scope of this evaluation. As an indication, it is suggested that a package of resources similar as the current phase (total budget of €500,000) is required.

Based on the learnings of the current phase, the duration of a potential next phase of the NCPP-Moldova should be at least three years in order to create sustainable impacts, high quality of outputs and outcomes, and ensure sufficient multi-stakeholder engagement throughout the entire next phase.

It is noted that the continuation of the EaP green program until December 2016 provides de facto for a lean next phase of the present project and/or transitional phase towards a full scale dedicated RECP project in Moldova.

The budgeting and project planning is obviously subject to further investigations and stakeholder discussions to assess the following:

- Level and changing RECP demands of stakeholders in industry, government, and NGOs.
- Criteria and opportunities of donor funding.
- Opportunities to incorporate self-funded and paid RECP services.
- Type of activities can be undertaken through parallel RECP-related initiatives (e.g. EaP GREEN, Energy efficiency fund, Low carbon technologies to green the industry).

10 Lessons learnt

Based on the evidence and findings of the evaluation, the lessons learnt of wider applicability beyond the evaluated Project can be summarized as follows:

- **RECP enabling role:** It is important to recognize where RECP service providers should play a leading or fostering role. The responsibility for developing and integrating RECP related policies and strategies should lie with the relevant government authorities. RECP service providers should provide a fostering role (e.g. facilitate, pilots, support) in this process. Overall, key strengths of RECP service providers are on providing a leading role on bottom-up RECP approaches in a country, including RECP capacity building, demonstration of RECP improvements in enterprises/public institutions, and facilitating multi-stakeholder engagement.
- **RECP Clubs as replication model:** The establishment of RECP Clubs has proven to be a successful concept to support the implementation and scaling up of RECP in the country. These clubs are built upon several success factors for replication elsewhere, including the involvement of regional communities, creation of so-called “industry champions”, trust building between local stakeholders, hands-on information sharing and problem solving, and creating platforms for tackling collective opportunities and challenges in the regions.
- **Full package of RECP services to beneficiaries:** Companies and public institutions need RECP services providers which can offer the full package of services to identify, develop, and implement RECP improvement options. This package of services should include the undertaking of technical RECP assessments, assisting companies and public institutions to find and access available funding opportunities, and preparing the business case for company investments in RECP solutions. This would better position companies to implement high impact RECP options which require upfront investments.
- **The importance of multi-stakeholder engagement:** Multi-stakeholder engagement processes are generally challenging and time consuming, but are key to the long-term success and sustainability of RECP initiatives in any country. It is important to find and communicate the common ground (e.g. implementation and scaling up of RECP) in order to effectively facilitate the multi-stakeholder engagement processes at local, national and regional level. The objectives and drivers for individual organizations should be recognized and where possible and appropriate be integrated into multi-stakeholder engagement processes. Multi-stakeholder engagement requires strategic planning and mapping of stakeholder needs and their decision making processes.
- **Legal set-up:** Careful attention should be paid to a legal set-up that allows cleaner production centers to function as service providers (to companies, donor-funded projects and where possible to government institutions) on commercial terms in order to ensure sufficient revenue generation to cover the costs of fulfilling their mandates beyond the end of UNIDO’s support. The selection for the most suitable legal entity requires a legal due diligence by a lawyer familiar with nationally appropriate legal forms. This learning is in line with recommendations from other national cleaner production centres in a similar development phase in other countries.
- **Utilize practical RECP experiences to inform policy making (bottom-up approach):** NCPP-Moldova promoted the practical implementation of RECP concepts and methods with companies and public institutions. These experiences should serve as a basis for outreach to policy makers to make them aware of the lessons learnt to improve the integration and implementation of existing policy

instruments. This is the core bottom-up approach in the policy adoption process practiced by the Project.

Annex A: Terms of reference of evaluation

TERMS OF REFERENCE**Independent final evaluation****National Cleaner Production Programme – Republic of Moldova**

(UNIDO project No. UE/MOL/11/002 – SAP 104143)

1. Introduction

The United Nations Industrial Development Organization (UNIDO) is the specialized intergovernmental organization that supports Inclusive and sustainable industrial development (ISID) in developing and transition countries. Its areas of intervention are industrial resource efficiency and sustainable production, trade capacity building and productive capacity building. Resource efficient and cleaner production (RECP) is an exemplary intervention area aimed at mobilizing enterprises, in particular small and medium sized enterprises (SMEs) from the manufacturing and related productive sectors to 'green' their operations and become more efficient in the use of natural resources (materials, energy and water) and less polluting (in terms of waste water, waste and emissions).

Resource efficient and cleaner production applies preventive environmental management techniques and total productivity practices with the triple aim of improving the efficient use of natural resources (materials, energy and water), minimizing the generation of wastes and emissions, and reducing the risks of industrial operations to workers, consumers and communities. Experiences from 1000s of enterprises globally representing all key manufacturing and related productive sectors have demonstrated that adopting RECP can be good for business, environment and climate, and ultimately development at large ⁽⁴²⁾.

With funding support from the Government of Austria (through its Ministry for Europe, Integration and Foreign Affairs), UNIDO implements the project entitled: "*National Cleaner Production Programme (NCPP) – Republic of Moldova*" (hereinafter the "Project"). The project is implemented within the framework of the joint global RECP programme with the United Nations Environment Programme (UNEP) for developing and transition countries, which builds upon the achievements, experiences and lessons learned by both organizations with establishing and supporting National cleaner production centres (NCPCs) globally since 1994 (www.unido.org/cp).

2. Project background

The present project in Moldova was designed during 2010-2011 on the basis of the achievements, experiences and lessons learned during the implementation of a (pilot) National Cleaner Production Programme (NCPP) in the Republic of Moldova, between 2009 and 2010, implemented with funding support from the Government of Czech Republic using the Technical University of Moldova (TUM) as national counterpart. Cleaner production

⁴² See e.g.: *Taking Stock and Moving Forward: the UNIDO-UNEP National Cleaner Production Centres*, UNIDO, 2010

assessments were completed in 5 companies from Chisinau, Orhei, and Riscani regions and 5 national experts were trained in conducting plant level assessments, whereas in addition several awareness and dissemination activities were undertaken.

Building on these pilot achievements, the present project aims to further advance the adaptation and adoption of RECP in the country, in particular in the food/agribusiness, construction materials and municipal services' sectors. The three-year project was formally approved in June 2011 and implementation commenced upon release of project funding in September 2011. The approved project budget is €500, 000 (inclusive of programme support costs). A zero-cost one year project extension was agreed in October 2014, with a view to complete the project by 30 September 2015. The project log frame is presented in annex 1.

The objective of the present project is to improve the resource efficiency and environmental performance of businesses and other organizations, in particular small and medium enterprises in the targeted food processing, construction materials and municipal services sectors, through the implementation of RECP methods, practices and policies. The project's activities have been further structured under three outputs, respectively:

1. *RECP capacity*: improved capacity for and wide-spread utilization of RECP services that support adaptation and adoption of RECP methods, practices and technologies, through the creation of a cadre of at least 15 national RECP experts and supportive communication and awareness activities, including regional workshops, national conference and web-site;
2. *RECP demonstration*: increased implementation of RECP methods, practices and technologies by enterprises in the target sectors with monitoring and verification of the environment, resource use and economic benefits achieved. Using different approaches some 100 companies will have started implementation of RECP opportunities with documented economic, environmental and resource conservation benefits; and
3. *RECP policy and strategy*: policy framework established and/or strengthened that enables the realization of RECP methods, practices and technologies in particular in the target sectors.

The project is implemented by UNIDO under guidance of National Executive Board through the engagement of the national and international experts, with the support of Technical University of Moldova (TUM) and selected municipalities. The project's logical framework is annexed (annex 1) to the ToR for this final evaluation.

The country' socio-political and economic situation has remained volatile over the implementation period of the Project as a result of both internal factors (weakened economic growth resulting from declining overseas remittances, exchange rate volatility and political change) and international developments in the region, including in particular the Ukraine crisis.

The government of the Republic of Moldova signed in 2014 an Association agreement with the European Union, which foresees a Deep and Comprehensive Free Trade Agreement (DCFTA). The Association Agreement is based on the '*more for more*' principle, i.e. the EU will provide more support and more market access as Moldova demonstrates more progress in implementing the terms of the association agreement and its economic and related reforms.

In order to support a regional focus on greening of economies, the EU further supports a regional action on greening of economies in its Eastern Partnership Countries (Armenia, Azerbaijan, Belarus, Moldova and Ukraine), implemented by a consortium led by the Organization for Economic Cooperation and Development (OECD), with contributions from

United Nations Economic Commission for Europe (UNECE), UNEP and UNIDO (EaP GREEN Programme, 2013-2016, see: <http://www.oecd.org/env/outreach/eapgreen.htm>).

As foreseen during the formulation of the project, a final evaluation of the project is now required to take stock of the achievements and experiences of the project and provide lessons learned for further promotion of RECP in Moldova.

3. Rationale and purpose

The terminal evaluation is conducted following UNIDO evaluation policy (see: <http://www.unido.org/en/resources/evaluation/evaluation-policy.html>). In particular final evaluations serve the general purpose of monitoring programme achievements, relative to stated aims, activities and outputs at the start of the project, determining observed impacts, identifying lessons learnt and providing suggestions for sustaining project achievements upon project completion.

The specific objectives of the present final evaluation are:

- To assess the performance of the project (covering its implementation and management) in terms of efficiency, effectiveness, impact and sustainability, viz-a-viz the logical framework and organizational and institutional arrangements for its implementation and monitoring;
- To ascertain the continued relevance of RECP for Moldovan businesses and other organization, taking into consideration the changed national socio-political and economic situation and other major initiatives of government and the international community; and
- To provide lessons learnt and potential recommendations with a view to furthering the adaptation and adoption of RECP in Republic of Moldova, including institutionalization, service portfolio, outreach and advocacy.

In doing so the dual purpose of the final evaluation is to account for the grant funding and other resources utilized by the project and to document and systematize the experiences gained with the present project in particular with a view to scaling up and mainstreaming RECP in small and medium enterprises (SMEs).

4. Scope and focus

This final evaluation is expected to cover all project activities implemented since project start, notionally from October 2011 – April 2015, covering all three output areas in a balanced manner (i.e. RECP Capacity, RECP demonstration and RECP policy).

The final evaluation is further expected to focus on the following three cross-cutting impact dimensions, namely:

1. *Institutionalization and Governance* (of RECP service delivery): progress in the institutionalization of the RECP service delivery, the formalization of the NCPP, its management systems and business processes, and the active participation of representatives of government, business and civil society in setting direction for and monitoring of the NCPP ⁽⁴³⁾;
2. *Adoption (of RECP methods, practices and techniques)*: the level of actual implementation of RECP methods, practices and techniques by final beneficiaries (enterprises in target regions and sectors) and the scale of economic, resource conservation and environmental benefits realized by them ⁽⁴⁴⁾, as well as RECP-relevant

⁴³ Taking into account international good practices, as for example documented in: UNIDO/UNEP (2010), *Good Organization, Management and Governance Practices: a primer for providers of services in resource efficient and cleaner production*, UNIDO/UNEP, Vienna/Paris, Austria/France.

⁴⁴ Using where appropriate enterprise level RECP indicators, as documented in: UNIDO/UNEP (2010), *Enterprise-Level Indicators for Resource Efficiency and Pollution Intensity: a primer for small and medium sized enterprises*, UNIDO/UNEP, Vienna/Paris, Austria/France.

project-enabled changes in government policy and/or strategy and in availability of technology and finance for enterprises; and

3. *Learning and Domestication* ⁽⁴⁵⁾: progress in learning from RECP experiences and achievements in Moldova, and incorporation of lessons learned into activities and services of the NCPP and its project activities, including, but not limited to: communications strategy and awareness raising activities; contents and structure of training; and types, methodology and approaches of RECP service delivery (to enterprises and government).

5. Evaluation issues and key evaluation questions

The following are the key issues to be addressed through the final evaluation.

i. ***Project formulation***

The extent to which:

- The views, perceptions and experiences of the target group (SMEs in particular in the food, construction materials, municipal services), as reflected in consultations during project formulation in 2010/11, have been considered, addressed and incorporated in the project design and addressed in project implementation;
- The views, perceptions and capacities of the national stakeholders (in particular the Government of Moldova (Ministries of economy, environment etc.), business/employers membership organizations and host institution) were assessed and addressed in the project design; and
- The guidelines and expectations of the donors (Government of Austria) enabled, or as the case might have been, constrained the formulation of a targeted project design.

ii. ***Ownership and relevance***

The extent to which:

- The partner organizations have been appropriately involved and were participating in the identification of the critical problem areas of the target beneficiaries and in the development of technical cooperation strategy and were actively supporting the implementation of the project including through in-kind and/or cash contributions;
- The outputs, as formulated in the logical framework:
 - Were relevant to the target beneficiaries, adequately balanced, and reasonably expected to be sufficient to achieve the expected outcomes and objectives over the project duration;
 - Have since project start been progressed in a balanced way (considering financial, institutional, human and other resources available to the project); and
 - Continue to be relevant to the target beneficiaries, taking into consideration the substantive socio-political and economic developments in the country, and continue to provide adequate prospect for ensuring project aims and objectives

⁴⁵ In this context, *domestication* is understood as the process of customizing and fine-tuning international RECP concepts, methods and practices to Moldova context and in particular the needs and opportunities experienced by target enterprises, with a view to make RECP more appropriate, attractive and affordable to those target enterprises and foster and catalyze their self interest in RECP adoption. Domestication is thereby a key enabler for scaling up and mainstreaming RECP in national context.

over the remaining project period (and/or otherwise suggest adjustments, including in targets and performance indicators)

iii. ***Efficiency of implementation***

The extent to which

- The resources and inputs of UNIDO (including those made available through the donor) and its partner organizations have been provided as planned and were adequate to achieve the requirements of the Project and respond to the needs of the target beneficiaries; and
- The quality of the inputs and services provided by UNIDO and its partner organizations were as planned and led to the production of the planned outputs.

iv. ***Effectiveness***

Assessment of:

- Quality and appropriateness of outputs produced and how the target beneficiaries use (and/or could use) these outputs; and
- Achievement of outputs and outcomes and/or likelihood of their achievement through further utilization of the outputs.

v. ***Impact and sustainability***

Assessment of:

- Long term developmental changes (economic, environment and social) that have occurred or are likely to occur as a result of the project and are these likely to be sustained after its completion;
- Replication and/or multiplication of the activities and outputs by partner organizations and/or other stakeholders; and
- Provisions made for sustaining the impacts achieved by the project, in terms of (i) human and institutional capacity for RECP service delivery (including, but not limited to the sustainability of the NCPP); (ii) economic, environmental and resource productivity benefits achieved by assisted enterprises (including their investments and acquired technology and improved management practices) and (iii) adoption and implementation of new policies, strategies and financing arrangements conducive to RECP in target enterprise sectors).

6. ***Project coordination and management***

The extent to which:

- The management, coordination and administration of the project have been efficient and effective, including for mobilization of resources and inputs by the partner organizations;
- The management, coordination and quality control have been efficient and effective;
- Monitoring and self-evaluation was carried out, were based on indicators for outputs, outcomes and/or objectives and using that information for the steering and adaptive management of the project;
- The operation of the National executive board have enabled and achieved effective steering and adaptive management of the project; and
- Synergy benefits were achieved in relation to other activities of UNIDO and/or the partner organizations in Moldova and/or elsewhere.

7. ***Evaluation approach and methodology***

The terminal evaluation is to be undertaken using good international practice in a transparent and accountable way, taking input from:

- Narrative progress reports and (annual) work plans of the project and minutes of the meetings of the National executive board
- Substantive reports produced, in particular reports on RECP training, RECP assessments and RECP policy and investment support provided; and
- Fact finding interviews with key partners of the project, in particular UNIDO, representatives of donor and recipient governments, national implementing partners and selected beneficiaries (national experts group and enterprises).

8. Time schedule and deliverables

The final evaluation of the project is to be completed during May – July 2015. One fact finding mission to Moldova is foreseen, tentatively 3-4 working days in Chisinau and 1-2 working days in affiliated regional hubs (Ungheni and/or Causeni).

The indicative time table is as follows:

- Contract signed with evaluators (31st May 2015)
- Desk review, planning of evaluation mission and drafting of inception note (to be completed by 19th June 2015)
- Field mission (to be completed by 3rd July 2015)
- Elaboration of draft report (to be completed by 24th July 2015)
- Finalization of evaluation report (to be completed on or before 10th August 2015).

The indicative table of content for the evaluation report is presented in annex 4.

A debriefing presentation of the evaluation consultant is foreseen in Vienna after the field mission

A brief inception note is to be submitted at the end of the desk review, which should outline the key issues to be further clarified and assessed during the field mission. The complete draft report in English language is to be submitted on or before 24th July 2015. Comments will be sought from UNIDO, NCPP and donor representatives) by 3rd August 2015. UNIDO will arrange translation into Romanian language of the executive summary of the final report.

9. Evaluation team

The evaluation will be undertaken by an evaluation team composed by one international expert in evaluation of technical cooperation projects and one national expert. The respective Job Descriptions are attached to these ToR (annex 2).

All members of the evaluation team must not have been involved in the design and/or implementation, supervision and coordination of any intervention to be assessed by the evaluation and/or have benefited from the programmes/projects under evaluation.

The evaluation will be managed and supervised by an evaluation manager appointed from the Office for Independent Evaluation of UNIDO. The UNIDO Project Manager, Unit Chief and management of the NCPP will be available as resource to the evaluators and evaluation manager.

The NCPP will assist with the planning and logistics of the evaluation mission. NCPP will avail one of its staff to assist in the planning and scheduling of the fact finding mission where needed.

10. Governance and management of the evaluation process

The ToR for this final evaluation was drafted by the project manager upon initial consultations with UNIDO Office for Independent Evaluation and representatives of donor and NCPP regarding scope, focus and objectives of the final evaluation. The ToR were next reviewed and cleared by the evaluation manager at the UNIDO Office for Independent Evaluation.

The evaluation manager will approve the inception note and evaluation report after having given an opportunity for review by project manager and responsible unit chief, donors and NCPP (both only for the evaluation report).

11. Quality assurance

Commensurate with UNIDO evaluation policy, this evaluation is subject to quality assessments by the UNIDO Office for Independent Evaluation. Quality control is exercised throughout the evaluation process. The quality of the evaluation report will be assessed and rated against the criteria set forth in the checklist on evaluation report quality, attached as annex 3.

12. Annexes

1. Log frame of the project
2. Job description evaluators
3. Checklist on evaluation report quality
4. Table of content for the evaluation report

Annex 1: Log frame

Logical framework

Narrative summary	Indicators	Means of verification	Assumptions
Objective			
<p>Programme objective: Improve resource productivity and environmental performance of enterprises and other organizations in Moldova and thereby contribute to sustainable industrial development and generation of employment and incomes</p>	<p>Aspects:</p> <ol style="list-style-type: none"> 1. <i>Environment</i>: reduced environmental footprint ⁽⁴⁶⁾ of enterprises 2. <i>Production Efficiency</i>: increased resource productivity ⁽⁴⁷⁾ and reduced operational and/or compliance costs of enterprises 3. <i>Policy and institutional</i>: conducive policies and regulations implemented and enforced and RECP promoted by strong national custodian 	<ul style="list-style-type: none"> • Final project evaluation • Aggregated results from demonstration and replication projects (outputs 2.1-2.3) • Publication of new policies, legislation and/or guidelines (national gazette or otherwise) 	
Outcome (Principal)			

⁴⁶ Environmental footprint is used as a shorthand for the total of the impacts of an enterprise on its surrounding environment, in particular through its discharges of waste and emissions; noise, odor, radiation and/or other nuisance factors; and impact on the quality of local ecosystems (through e.g. extraction of water and harvesting or extracting of other natural resources). The total of environmental impacts of a business can in principle be expressed with a proxy, aggregated environmental pressure indicator such as ecological footprint. Improvements in the environmental performance of the business over time are best expressed in terms of pollution intensities, i.e. kg waste per ton of product or kg of GHG emission per ton of product.

⁴⁷ Resource productivity is concerned with the productive use of natural resources by the enterprise or other organization as measured in the ratio of value creation or productive output per unit of resource consumption (including water, energy and materials), e.g. MVA/energy (USD/MJ) or MVA/water (USD/GL).

Narrative summary	Indicators	Means of verification	Assumptions
RECP concepts, methods, practices, technologies and policies implemented by enterprises, government authorities and other stakeholders in Moldova	<ol style="list-style-type: none"> 1. RECP activities of enterprises 2. RECP activities of government authorities 	<ul style="list-style-type: none"> • Final project evaluation • Annual reports of enterprises, government agencies and other stakeholders 	<ul style="list-style-type: none"> • RECP is beneficial for enterprises in Moldova and these can appropriate tangible and measurable benefits from RECP implementation ('win-win' premise)
Outcomes (Contributing)			
<p><i>Outcome 1:</i> RECP Capacity: NCPP-Moldova delivers value-adding RECP services to enterprises, government organizations and other relevant stakeholders</p>	<ol style="list-style-type: none"> 1.1. Recognition of NCPP-Moldova by private and public sectors and civil society 	<ul style="list-style-type: none"> • Final project evaluation • Annual activity, management and governance reports of NCPP-Moldova • Appreciation received for NCPP activities from third parties (government, industry and professional associations), as for example reflected in their respective annual reports 	<ul style="list-style-type: none"> • Limited uptake of RECP by enterprises of the target groups is at least in part a result of lacking supply of appropriate RECP services that deliver value to enterprises and other organizations in the target sectors

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Outcome 2:</u> RECP Implementation: RECP concepts, methods, practices and technologies have been implemented by enterprises and other organizations in Moldova and their environment, resource use and economic benefits have been monitored and verified ⁽⁴⁸⁾</p>	<p>2.1. Reduced waste and pollution intensities of enterprises 2.2. Increased resource productivity of enterprises 2.3. Reduced operational and compliance costs of enterprises</p>	<ul style="list-style-type: none"> • Environment, financial and/or sustainability reports of enterprises • Annual report of NCPP-Moldova • Final project evaluation 	<ul style="list-style-type: none"> • There is insufficient consideration of the potential and importance of RECP as cornerstone for improved environmental and utility services, including water, sanitation, waste and waste water. • Availability of compelling success stories with environmental, resource use and cost benefits of RECP implementation would accelerate the wider consideration and uptake of RECP concepts, methods and practices.
<p><u>Outcome 3:</u> RECP Policy and Strategy Mechanisms for mainstreaming RECP concepts and policy instruments have been created at suitable administrative levels in relevant policies and regulations in Moldova</p>	<p>3.1. Increased role for RECP in environmental, industry and other relevant policies at appropriate administrative levels</p>	<ul style="list-style-type: none"> • Annual reports of NCPP Moldova • Final project evaluation • Publication of relevant policies, strategies and guidelines by the government of the Republic of Moldova 	<ul style="list-style-type: none"> • Consideration and uptake of RECP methods by enterprises and other organizations is constrained by lack of policy incentives

Work-stream 1: RECP Capacity

⁴⁸ Monitoring of benefits will follow the framework outlined in: *Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises*, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<u>Output 1.1:</u> NCPP-Moldova set up and operating as per agreed institutional and governance provisions	1.1.1. Effective guidance and supervision of NCPP-Moldova by National executive board and Advisory Forum following good international practices ⁽⁴⁹⁾ 1.1.2. Annual work plan and progress reports on NCPP activities and achievements	<ul style="list-style-type: none"> • Meeting minutes of Executive Board and Advisory Forum • Annual work plans and progress reports of NCPP Moldova • Final project evaluation 	<ul style="list-style-type: none"> • Solid institutional foundation and transparent governance mechanisms are required to bolster national ownership and continuity of service delivery.
<u>Key Activities</u> 1.1.1. Establishment of National executive board and Advisory forum and formalisation of its relationships with key project personnel and host institution 1.1.2. Preparation of annual work plans for NCPP Moldova and endorsement by National executive board 1.1.3. Management and implementation of agreed project activities by NCPP Moldova through host institution and associated national and international experts 1.1.4. Preparation of bi-annual activity reports on NCPP-Moldova and review by National executive board			
<u>Output 1.2:</u> Staff and associated experts of NCPP Moldova trained in basic and advanced RECP methods and applications	1.2.1. National experts trained in basic RECP assessment methods (target 20 experts) 1.2.2. Training delivered on three advanced/associated RECP topics	<ul style="list-style-type: none"> • Annual reports of NCPP-Moldova • Attendance records for training events 	<ul style="list-style-type: none"> • Lacking professional capacity for delivery of value adding RECP services prevents enterprises in the target

⁴⁹ Taking due consideration of: *Good Management, Organization and Governance Practices: a primer for the providers of services in resource efficient and cleaner production*, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Key activities:</u></p> <p>1.2.1. Basic training of national experts in RECP assessment methods, in two rounds, using UNIDO CP Toolkit as the basic resource</p> <p>1.2.2. Advanced training for national experts on three topics</p>		<ul style="list-style-type: none"> • Training materials produced and utilized 	<p>sectors from considering and implementing RECP opportunities</p>
<p><u>Output 1.3:</u> Awareness and understanding of RECP opportunities and benefits improved at the national and regional levels among enterprises, government and civil society</p>	<p>1.3.1. Internet website and help-desk</p> <p>1.3.2. Awareness seminars (target 12)</p> <p>1.3.3. National conferences (target 2)</p>	<ul style="list-style-type: none"> • Annual reports of NCPP Moldova • Availability of promotion materials • Proceedings of national conference • Attendance records of awareness seminars • Availability and currency of internet web-site and help-desk 	<ul style="list-style-type: none"> • Awareness and knowledge of opportunities for and benefits of RECP is very low among enterprises and government agencies in Moldova
<p><u>Key activities:</u></p> <p>1.3.1. Establish, update and maintain interactive bi-lingual website on RECP in Moldova</p> <p>1.3.2. Organize and host two national RECP conferences or symposia</p> <p>1.3.3. Organize and deliver awareness and dissemination seminars in different regions, for different target groups and/or sectors</p>			
Work stream 2: RECP Implementation			

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Output 2.1:</u> Potential for reduction of waste and effluent generation and water use demonstrated in Moldovan enterprises and other organizations</p>	<p>2.1.1. Implementation of RECP methods and practices in demonstration companies in target sectors (target 30+ 'demonstration' enterprises)</p> <p>2.1.2. Monitored resource productivity, environment and economic benefits as achieved by participating enterprises</p> <p>2.1.3. At least five enterprise success stories of RECP implementation per sector (target: 15+ success stories)</p>	<ul style="list-style-type: none"> • Activity reports NCPP Moldova • RECP assessment reports for demonstration companies • Enterprise success stories with documented economic, environmental and other benefits (using common indicator framework ⁽⁵⁰⁾) 	<ul style="list-style-type: none"> • RECP methods, practices and technologies can be utilised to achieve significant reductions in waste and effluent generation and water use in the target sectors
<p><u>Key activities</u></p> <p>2.1.1. Identification and recruitment of demonstration companies from priority sectors</p> <p>2.1.2. In depth assessments in demonstration companies in two rounds (in combination with 1.2.1)</p> <p>2.1.3. Follow up monitoring and evaluation of benefits achieved after RECP implementation in participating demonstration companies</p> <p>2.1.4. Preparation, publication and dissemination of enterprise success stories</p>			

⁵⁰ Monitoring of benefits will follow the framework outlined in: *Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises*, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Output 2.2:</u> Mechanisms developed, trialled and installed for regional replication and scaling up of RECP in Moldovan enterprises and other organizations</p>	<p>2.2.1. Regional replication programme developed and delivered in four regions</p> <p>2.2.2. Successful completion of replication programme by at least 60 enterprises</p> <p>2.2.3. Monitored resource productivity, environment and economic benefits of participating enterprises</p> <p>2.2.4. Booklet on RECP successes for each participating region</p>	<ul style="list-style-type: none"> • Activity reports of NCPP Moldova • Resource materials for the replication programme • Success booklets for each participating region with documented economic, environmental and other benefits (using common indicator framework ⁽⁵¹⁾) 	
<p><u>Key Activities:</u></p> <p>2.2.1. Development of regional replication programme, including resource materials</p> <p>2.2.2. Promotion of regional replication programme in four regions and recruitment of companies</p> <p>2.2.3. Delivery of the replication programme in four regions over two rounds</p> <p>2.2.4. Evaluation of impact of each replication programme on participating businesses and preparation and distribution of success booklet</p>			

⁵¹ Monitoring of benefits will follow the framework outlined in: *Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises*, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<u>Output 2.3:</u> Pilot projects for adaptation and adoption of innovative RECP technologies developed, evaluated and promoted for investment and implementation	2.3.1. Appropriate key RECP technologies identified for target sectors 2.3.2. Formulation and promotion of technology pilot projects, including detailed feasibility and investment analysis (target 15+ enterprises)	<ul style="list-style-type: none"> • Activity reports of NCPP Moldova • Technology and financial proposals for participating enterprises along with projected economic, environmental and other benefits (using common indicator framework ⁽⁵²⁾) 	
<u>Key activities:</u> 2.3.1. Undertake technology gap assessment and identify appropriate RECP technologies 2.3.2. Undertake detailed feasibility and investment analysis for selected RECP technologies with high potential 2.3.3. Prepare and promote pilot projects involving innovative RECP technology			
Output Category 3: RECP Policy and Strategy			
<u>Output 3.1:</u> Policy assessment carried out and RECP strategy formulated	3.1.1. Policy gap assessment report 3.1.2. Proposed RECP strategy 3.1.3. Records of stakeholders consultations and endorsement	<ul style="list-style-type: none"> • Policy gap assessment report • Publication of RECP strategy • Records of stakeholders' consultations • Activity report of NCPP Moldova 	<ul style="list-style-type: none"> • Government of the Republic of Moldova and relevant stakeholders from business sector and civil society are interested and committed to develop, implement and enforce RECP-conducive policy and regulations
<u>Key Activities:</u> 3.1.1. Undertake review of existing policies and strategies 3.1.2. Consult key stakeholders from government, business and civil society 3.1.3. Prepare and promote national RECP strategy			

⁵² Monitoring of benefits will follow the framework outlined in: *Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises*, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<u>Output 3.2:</u> National action plan for RECP developed inclusive of appropriate implementation mechanisms	3.2.1. National RECP action plan developed and promoted 3.2.2. Policy makers trained	<ul style="list-style-type: none"> National RECP action plan Records of training activities Activity reports of NCPP Moldova 	
<u>Key Activities:</u> 3.2.1. Identification and prioritization of key actions and policy instruments in national RECP strategy 3.2.2. Training of policy makers in prioritized policy instruments 3.2.3. Proposals for institutional embedment of prioritized policy instruments developed and promoted for further development and implementation			
<u>Output 3.3:</u> Implementation and enforcement capacity of government for RECP-related policy and legislation enhanced	3.3.1. Implementation pilots undertaken with key policy instruments	<ul style="list-style-type: none"> Reports of completed policy trials, including results, lessons learned and recommendations for further deployment 	
<u>Key Activities:</u> 3.3.1. Plan and implement pilot projects with agreed priority policy instruments 3.3.2. Evaluate pilot findings and provide recommendations for mainstreaming of lessons learned in regular policy practice			
<u>Output 3.4:</u> Institutional framework for sustained RECP advocacy and RECP service delivery established	3.4.1. Agreement on appropriate institutional set up and possibly legal entity for NCPP-Moldova 3.4.2. Business and operational plans for continued operation of NCPP Moldova	<ul style="list-style-type: none"> Publication of strategic and business plans for continued operation of NCPP Moldova 	
<u>Key Activities:</u> 3.4.1. Development of long term strategy for independent operation of NCPP Moldova with appropriate institutional and legal legitimacy 3.4.2. Prepare and business and operational plans for operation of NCPP Moldova			

Annex 2: Job descriptions

Post title:	International evaluation expert (Project evaluation)
Duration:	25 working days, including 5-6 working days fact finding mission in Moldova and one working day in Vienna
Date required:	3 rd June 2015, completed before 10 th August 2015
Duty station:	Chisinau, Republic of Moldova, with national travel within Moldova, as required for fact finding
Counterpart:	Ministry of Environment and Ministry of Economy, Republic of Moldova

Under the direct supervision of the UNIDO Headquarters evaluation manager and with the support of the project Manager, the International evaluation expert is responsible to carry out the following tasks:

Tasks	Expected duration	Expected results
Undertake desk review of management, activity, output and related documents of the project and prepare initial set of evaluation findings and questions for clarification and additional data collection during field fact finding mission	7 working days	– Inception note with key findings and outstanding issues, submitted to evaluation manager
Undertake field mission to Moldova to consult project partners and beneficiaries, to verify and complete preliminary evaluation findings from desk review	6 working days (MOLDOVA)	– Completed additional fact finding and data evaluation
Presentation and discussion of preliminary findings	1 working days (UNIDO HQ)	– Preliminary findings discussed with UNIDO staff and feedback obtained
Prepare and submit draft report of final evaluation, including evaluation findings and recommendations and lessons learned	8 working days	– Draft evaluation report submitted to evaluation manager for review
Finalize evaluation report, on basis of comments and suggestions received through evaluation manager	3 working days	– Final evaluation report submitted to evaluation manager

Requirements

Relevant university degree; over 5 years project evaluation experience; excellent oral and written communication skills in English; demonstrated familiarity with private sector development and (corporate) environmental responsibility, including preferably Resource Efficient and Cleaner Production. Demonstrated experience in Eastern Europe, Caucasus and/or Central Asia is also required and specific experience in Moldova would be positively looked upon. Knowledge of Romanian or Russian language is an asset.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the Office for Independent Evaluation.

Post title: National evaluation expert (Project evaluation)
Duration: 18 working days,
Date required: 3rd June 2015, completed before 10th August 2015
Duty station: Home based (Chisinau, Moldova), with national travel within Moldova, as required for fact finding
Counterpart: Ministry of Economy and Ministry of Environment, Republic of Moldova

Under the direct supervision of the UNIDO Headquarters evaluation manager and with the support of the project manager, the national evaluation expert is responsible to carry out the following tasks:

Tasks	Expected duration	Expected results
Assist international evaluation expert with summary of activities and achievements of the project as input for the final evaluation	3 working days	– Concise summary of status of implementation and achievement of the project activities relative to the project's logical framework
Assist international evaluation expert with desk review of management, activity, output and related documents of the project and on basis thereof plan and organize fact finding mission for the international project evaluator	6 working days	– Fact finding mission prepared and meeting schedule confirmed
Support the field mission of international evaluator and assist him/her in consultations of project partners and beneficiaries, to verify and complete preliminary evaluation findings from desk review	6 working days)	– Completed additional fact finding and data evaluation
Provide inputs to the draft report of mid-term evaluation, including evaluation findings and recommendations and lessons learned for continued implementation of the project	2 working days	– Draft evaluation report submitted to evaluation manager for review
Provide inputs to the final evaluation report, on basis of comments and suggestions received through evaluation manager	1 working days	– Final evaluation report submitted to evaluation manager

Requirements

University degree in relevant business, public policy or engineering discipline, Knowledge of Moldovan industrial development situation, institutions and programmes, and its environmental and resource/energy use situation; Knowledge of UNIDO; and evaluation experience.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the Office for Independent Evaluation.

Annex 3: Assessment of evaluation reportRating system for quality of evaluation reports

Report quality criteria	UNIDO Office for Independent evaluation assessment notes	Rating
a. Did the report present an assessment of relevant outcomes and achievement of programme objectives?		
b. Were the report consistent and the evidence complete and convincing?		
c. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible?		
d. Did the evidence presented support the lessons and recommendations?		
e. Did the report include the actual programme costs (total and per activity)?		
f. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
g. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented?		
h. Was the report well written? (Clear language and correct grammar)		
i. Were all evaluation aspects specified in the TOR adequately addressed?		
j. Was the report delivered in a timely manner?		

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

Annex 4: Table of contents for the evaluation report

I. Executive summary

- Must be self-explanatory
- Not more than five pages focusing on the most important findings and recommendations
- Overview showing strengths and weaknesses of the project

II. Introduction

- Information on the evaluation: why, when, by whom, etc.
- Information sources and availability of information
- Methodological remarks and validity of the findings
- Project summary (“fact sheet”, including project structure, objectives, donors, counterparts, timing, cost, etc)

III. Country and project context

This chapter provides evidence for the assessment under chapter IV (in particular relevance and sustainability):

- Brief description including history and previous cooperation
- Project specific framework conditions; situation of the country; major changes over project duration
- Positioning of the project (other initiatives of government, other donors, private sector, etc.)
- Counterpart organisation(s); (changes in the) situation of the

IV. Project planning

This chapter describes the planning process as far as relevant for the assessment under chapter IV:

- Project identification (stakeholder involvement, needs of target groups analysed, depth of analysis, etc.)
- Project formulation (stakeholder involvement, quality of project document, coherence of intervention logic, etc.)
- Description of the underlying intervention theory (causal chain: inputs-activities-outputs-outcomes)
- Funds mobilization

V. Project implementation

This chapter describes what has been done and provides evidence for the assessment under chapter IV:

- Financial implementation (overview of expenditures, changes in approach reflected by budget revisions, etc.)
- Management (in particular monitoring, self-assessment, adaptation to changed circumstances, etc.)
- Outputs (inputs used and activities carried out to produce project outputs)
- Outcome, impact (what changes at the level of target groups could be observed, refer to outcome indicators in project document if any)

VI. Assessment

The assessment is based on the analysis carried out in chapter II, III and IV. It assesses the underlying intervention theory (causal chain: inputs-activities-outputs-outcomes). Did it prove to be plausible and realistic? Has it changed during implementation? This chapter includes the following aspects:

- Relevance (evolution of relevance over time: relevance to UNIDO, Government, counterparts, target groups)
- Ownership
- Efficiency (quality of management, quality of inputs, were outputs produced as planned? were synergies with other initiatives sufficiently exploited? Did UNIDO draw on relevant in-house and external expertise? Was management results oriented?)
- Effectiveness and impact (assessment of outcomes and impact, reaching target groups)
- Sustainability
- If applicable: overview table showing performance by outcomes/outputs
- Assessment of gender mainstreaming
- Procurement issues

VII. Issues with regard to a possible next phase

- Assessment, in the light of the evaluation, of proposals put forward for a possible next phase
- Recommendations on how to proceed under a possible next phase, overall focus, outputs, activities, budgets, etc.

VIII. Recommendations

- Recommendations must be based on evaluation findings
- The implementation of the recommendations must be verifiable (indicate means of verification)
- Recommendations must be actionable; addressed to a specific officer, group or entity who can act on it; have a proposed timeline for implementation
- Recommendations should be structured by addressees:
 - UNIDO
 - Government and/or counterpart organisations
 - Donor

IX. Lessons learned

- Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation

Annex B: Project logical framework

Narrative summary	Indicators	Means of verification	Assumptions
Objective			
<p>Programme objective: Improve resource productivity and environmental performance of enterprises and other organizations in Moldova and thereby contribute to sustainable industrial development and generation of employment and incomes</p>	<p>Aspects: 4. <i>Environment</i>: reduced environmental footprint⁽⁵³⁾ of enterprises 5. <i>Production efficiency</i>: increased resource productivity⁽⁵⁴⁾ and reduced operational and/or compliance costs of enterprises 6. <i>Policy and institutional</i>: conducive policies and regulations implemented and enforced and RECP promoted by strong national custodian</p>	<ul style="list-style-type: none"> Final project evaluation Aggregated results from demonstration and replication projects (outputs 2.1-2.3) Publication of new policies, legislation and/or guidelines (national gazette or otherwise) 	
Outcome (Principal)			
RECP concepts, methods, practices, technologies and policies implemented by enterprises, government authorities and other stakeholders in Moldova	3. RECP activities of enterprises 4. RECP activities of government authorities	<ul style="list-style-type: none"> Final project evaluation Annual reports of enterprises, government agencies and other stakeholders 	<ul style="list-style-type: none"> RECP is beneficial for enterprises in Moldova and these can appropriate tangible and measurable benefits from RECP implementation ('win-win' premise)
Outcomes (Contributing)			

⁵³ Environmental footprint is used as a shorthand for the total of the impacts of an enterprise on its surrounding environment, in particular through its discharges of waste and emissions; noise, odor, radiation and/or other nuisance factors; and impact on the quality of local ecosystems (through e.g. extraction of water and harvesting or extracting of other natural resources). The total of environmental impacts of a business can in principle be expressed with a proxy, aggregated environmental pressure indicator such as ecological footprint. Improvements in the environmental performance of the business over time are best expressed in terms of pollution intensities, i.e. kg waste per ton of product or kg of GHG emission per ton of product.

⁵⁴ Resource productivity is concerned with the productive use of natural resources by the enterprise or other organization as measured in the ratio of value creation or productive output per unit of resource consumption (including water, energy and materials), e.g. MVA/energy (USD/MJ) or MVA/water (USD/GL).

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Outcome 1:</u> RECP capacity: NCPP-Moldova delivers value-adding RECP services to enterprises, government organizations and other relevant stakeholders</p>	<p>1.2. Recognition of NCPP-Moldova by private and public sectors and civil society</p>	<ul style="list-style-type: none"> • Final project evaluation • Annual activity, management and governance reports of NCPP-Moldova • Appreciation received for NCPP activities from third parties (government, industry and professional associations), as for example reflected in their respective annual reports 	<ul style="list-style-type: none"> • Limited uptake of RECP by enterprises of the target groups is at least in part a result of lacking supply of appropriate RECP services that deliver value to enterprises and other organizations in the target sectors
<p><u>Outcome 2:</u> RECP Implementation: RECP concepts, methods, practices and technologies have been implemented by enterprises and other organizations in Moldova and their environment, resource use and economic benefits have been monitored and verified ⁽⁵⁵⁾</p>	<p>2.4. Reduced waste and pollution intensities of enterprises 2.5. Increased resource productivity of enterprises 2.6. Reduced operational and compliance costs of enterprises</p>	<ul style="list-style-type: none"> • Environment, financial and/or sustainability reports of enterprises • Annual report of NCPP-Moldova • Final project evaluation 	<ul style="list-style-type: none"> • There is insufficient consideration of the potential and importance of RECP as cornerstone for improved environmental and utility services, including water, sanitation, waste and waste water. • Availability of compelling success stories with environmental, resource use and cost benefits of RECP implementation would accelerate the wider consideration and uptake of RECP concepts, methods and practices.

⁵⁵ Monitoring of benefits follow the framework outlined in: Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Outcome 3:</u> RECP policy and strategy Mechanisms for mainstreaming RECP concepts and policy instruments have been created at suitable administrative levels in relevant policies and regulations in Moldova</p>	<p>3.2. Increased role for RECP in environmental, industry and other relevant policies at appropriate administrative levels</p>	<ul style="list-style-type: none"> • Annual reports of NCPP-Moldova • Final project evaluation • Publication of relevant policies, strategies and guidelines by the Government of the Republic of Moldova 	<ul style="list-style-type: none"> • Consideration and uptake of RECP methods by enterprises and other organizations is constrained by lack of policy incentives
Work-stream 1: RECP Capacity			
<p><u>Output 1.1:</u> NCPP-Moldova set up and operating as per agreed institutional and governance provisions</p>	<p>1.1.3. Effective guidance and supervision of NCPP-Moldova by National executive board and Advisory Forum following good international practices (⁵⁶)</p> <p>1.1.4. Annual work plan and progress reports on NCPP activities and achievements</p>	<ul style="list-style-type: none"> • Meeting minutes of Executive board and Advisory forum • Annual work plans and progress reports of NCPP Moldova • Final project evaluation 	<ul style="list-style-type: none"> • Solid institutional foundation and transparent governance mechanisms are required to bolster national ownership and continuity of service delivery.

⁵⁶ Taking due consideration of: Good Management, Organization and Governance Practices: a primer for the providers of services in resource efficient and cleaner production, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Key Activities</u></p> <p>1.1.5. Establishment of National executive board and Advisory forum and formalization of its relationships with key project personnel and host institution</p> <p>1.1.6. Preparation of annual work plans for NCPP-Moldova and endorsement by National executive board</p> <p>1.1.7. Management and implementation of agreed project activities by NCPP-Moldova through host institution and associated national and international experts</p> <p>1.1.8. Preparation of bi-annual activity reports on NCPP-Moldova and review by National executive board</p>			
<p><u>Output 1.2:</u> Staff and associated experts of NCPP-Moldova trained in basic and advanced RECP methods and applications</p>	<p>1.2.3. National experts trained in basic RECP assessment methods (target 20 experts)</p> <p>1.2.4. Training delivered on three advanced/associated RECP topics</p>	<ul style="list-style-type: none"> • Annual reports of NCPP-Moldova • Attendance records for training events • Training materials produced and utilized 	<ul style="list-style-type: none"> • Lacking professional capacity for delivery of value adding RECP services prevents enterprises in the target sectors from considering and implementing RECP opportunities
<p><u>Key activities:</u></p> <p>1.2.3. Basic training of national experts in RECP assessment methods, in two rounds, using UNIDO CP Toolkit as the basic resource</p> <p>1.2.4. Advanced training for national experts on three topics</p>			
<p><u>Output 1.3:</u> Awareness and understanding of RECP opportunities and benefits improved at the national and regional levels among enterprises, government and civil society</p>	<p>1.3.4. Internet website and help-desk</p> <p>1.3.5. Awareness seminars (target 12)</p> <p>1.3.6. National conferences (target 2)</p>	<ul style="list-style-type: none"> • Annual reports of NCPP-Moldova • Availability of promotion materials • Proceedings of national conference 	<ul style="list-style-type: none"> • Awareness and knowledge of opportunities for and benefits of RECP is very low among enterprises and government agencies in Moldova

Narrative summary	Indicators	Means of verification	Assumptions
<p><u>Key activities:</u></p> <p>1.3.4. Establish, update and maintain interactive bi-lingual website on RECP in Moldova</p> <p>1.3.5. Organize and host two national RECP conferences or symposia</p> <p>1.3.6. Organize and deliver awareness and dissemination seminars in different regions, for different target groups and/or sectors</p>		<ul style="list-style-type: none"> • Attendance records of awareness seminars • Availability and currency of internet web-site and help-desk 	
Work stream 2: RECP Implementation			

Narrative summary	Indicators	Means of verification	Assumptions
<p><i>Output 2.1:</i> Potential for reduction of waste and effluent generation and water use demonstrated in Moldovan enterprises and other organizations</p>	<p>2.1.4. Implementation of RECP methods and practices in demonstration companies in target sectors (target 30+ 'demonstration' enterprises)</p> <p>2.1.5. Monitored resource productivity, environment and economic benefits as achieved by participating enterprises</p> <p>2.1.6. At least five enterprise success stories of RECP implementation per sector (target: 15+ success stories)</p>	<ul style="list-style-type: none"> • Activity reports NCPP-Moldova • RECP assessment reports for demonstration companies • Enterprise success stories with documented economic, environmental and other benefits (using common indicator framework ⁽⁵⁷⁾) 	<ul style="list-style-type: none"> • RECP methods, practices and technologies can be utilized to achieve significant reductions in waste and effluent generation and water use in the target sectors
<p><i>Key activities</i></p> <p>2.1.5. Identification and recruitment of demonstration companies from priority sectors</p> <p>2.1.6. In depth assessments in demonstration companies in two rounds (in combination with 1.2.1)</p> <p>2.1.7. Follow up monitoring and evaluation of benefits achieved after RECP implementation in participating demonstration companies</p> <p>2.1.8. Preparation, publication and dissemination of enterprise success stories</p>			

⁵⁷ Monitoring of benefits follow the framework outlined in: Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<p><i>Output 2.2:</i> Mechanisms developed, trialed and installed for regional replication and scaling up of RECP in Moldovan enterprises and other organizations</p>	<p>2.2.5. Regional replication programme developed and delivered in four regions</p> <p>2.2.6. Successful completion of replication programme by at least 60 enterprises</p> <p>2.2.7. Monitored resource productivity, environment and economic benefits of participating enterprises</p> <p>2.2.8. Booklet on RECP successes for each participating region</p>	<ul style="list-style-type: none"> • Activity reports of NCPP-Moldova • Resource materials for the replication programme • Success booklets for each participating region with documented economic, environmental and other benefits (using common indicator framework ⁽⁵⁸⁾) 	
<p><i>Key Activities:</i></p> <p>2.2.5. Development of regional replication programme, including resource materials</p> <p>2.2.6. Promotion of regional replication programme in four regions and recruitment of companies</p> <p>2.2.7. Delivery of the replication programme in four regions over two rounds</p> <p>2.2.8. Evaluation of impact of each replication programme on participating businesses and preparation and distribution of success booklet</p>			

⁵⁸ Monitoring of benefits follow the framework outlined in: Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<u>Output 2.3:</u> Pilot projects for adaptation and adoption of innovative RECP technologies developed, evaluated and promoted for investment and implementation	2.3.3. Appropriate key RECP technologies identified for target sectors 2.3.4. Formulation and promotion of technology pilot projects, including detailed feasibility and investment analysis (target 15+ enterprises)	<ul style="list-style-type: none"> • Activity reports of NCPP-Moldova • Technology and financial proposals for participating enterprises along with projected economic, environmental and other benefits (using common indicator framework ⁽⁵⁹⁾) 	
<u>Key activities:</u> 2.3.4. Undertake technology gap assessment and identify appropriate RECP technologies 2.3.5. Undertake detailed feasibility and investment analysis for selected RECP technologies with high potential 2.3.6. Prepare and promote pilot projects involving innovative RECP technology			
Output Category 3: RECP policy and strategy			
<u>Output 3.1:</u> Policy assessment carried out and RECP strategy formulated	3.1.4. Policy gap assessment report 3.1.5. Proposed RECP strategy 3.1.6. Records of stakeholders consultations and endorsement	<ul style="list-style-type: none"> • Policy gap assessment report • Publication of RECP strategy • Records of stakeholders' consultations • Activity report of NCPP-Moldova 	<ul style="list-style-type: none"> • Government of the Republic of Moldova and relevant stakeholders from business sector and civil society are interested and committed to develop, implement and enforce RECP-conducive policy and regulations
<u>Key Activities:</u> 3.1.4. Undertake review of existing policies and strategies 3.1.5. Consult key stakeholders from government, business and civil society 3.1.6. Prepare and promote national RECP strategy			

⁵⁹ Monitoring of benefits follow the framework outlined in: Enterprise level resource productivity and environmental pollution intensity indicators: a primer for Small and Medium Enterprises, UNIDO and UNEP, 2010.

Narrative summary	Indicators	Means of verification	Assumptions
<u>Output 3.2:</u> National action plan for RECP developed inclusive of appropriate implementation mechanisms	3.2.3. National RECP action plan developed and promoted 3.2.4. Policy makers trained	<ul style="list-style-type: none"> • National RECP action plan • Records of training activities • Activity reports of NCPP-Moldova 	
<u>Key Activities:</u> 3.2.4. Identification and prioritization of key actions and policy instruments in national RECP strategy 3.2.5. Training of policy makers in prioritized policy instruments 3.2.6. Proposals for institutional embedment of prioritized policy instruments developed and promoted for further development and implementation			
<u>Output 3.3:</u> Implementation and enforcement capacity of government for RECP-related policy and legislation enhanced	3.3.2. Implementation pilots undertaken with key policy instruments	<ul style="list-style-type: none"> • Reports of completed policy trials, including results, lessons learned and recommendations for further deployment 	
<u>Key Activities:</u> 3.3.3. Plan and implement pilot projects with agreed priority policy instruments 3.3.4. Evaluate pilot findings and provide recommendations for mainstreaming of lessons learned in regular policy practice			
<u>Output 3.4:</u> Institutional framework for sustained RECP advocacy and RECP service delivery established	3.4.3. Agreement on appropriate institutional set up and possibly legal entity for NCPP-Moldova 3.4.4. Business and operational plans for continued operation of NCPP-Moldova	<ul style="list-style-type: none"> • Publication of strategic and business plans for continued operation of NCPP-Moldova 	
<u>Key Activities:</u> 3.4.3. Development of long term strategy for independent operation of NCPP-Moldova with appropriate institutional and legal legitimacy 3.4.4. Prepare and business and operational plans for operation of NCPP-Moldova			

Annex C: Project history and previous cooperation

Various donors initiated from 2000 onward RECP and related projects in the Republic of Moldova, including:

- The Government of Norway provided long term support for Cleaner production and Energy efficiency between 2001 and 2008, implemented by Energy Savings International and the Norwegian Society of Chartered Engineers. Training programmes were delivered on Environmental Management Systems (EMS), industrial and building energy efficiency and cleaner production in four cities in Moldova (Chisinau, Balty, Tiraspol and Comrat). According to the project completion report⁶⁰, 27 manufacturing companies benefitted from implementation of 197 CP options with a total investment cost of approximately 1 million USD and annual savings exceeding 1.5 million USD. The Moldovan Cleaner Production and Energy Efficiency Centre (MCPEEC) would have been established, and had been reported to have become financially independent from July 2005. A revolving fund was created with a capitalization of USD 25,000 and provided loans to four companies for implementation of CP options with total investment value just over USD 34,000. Moreover, an Energy Efficiency Audit Unit was established, trained and equipped at the Technical University of Moldova.
- The Government of the Czech Republic provided funding to the Czech Cleaner Production Centre to provide CP training and undertake CP assessments in six enterprises in Moldova, during 2001-2003. Total identified annual savings mounted up to € 450,000⁶¹.
- The government of The Netherlands provided funding for the preparatory stage for an environmental centre for the wine industry, with a view to start producing organic wines in the Republic of Moldova. The project was terminated mid-way.
- The European Commission provided through its Tempus Programme funding for a Joint European project on education through Master courses in Environment and Clean technologies, which continue to be delivered through TUM⁶².
- The European Commission also supported under its Technical Assistance for Commonwealth of Independent States (TACIS) Programme between February 2003 and October 2005 a regional Cleaner Production Programme for Moldova, Georgia and Kazakhstan. The project was implemented by an international consortium led by the Polish Cleaner Production Technology Centre, and utilized the Regional Environment Centre (REC) in Moldova as its local counterpart.

In 2010, the NCPP-Moldova made an attempt to take stock of remnants of the above mentioned projects. However, it was not possible to identify any ongoing activities or impacts from these above mentioned projects. Hence it was concluded that neither these earlier projects had a sustainable impact on RECP promotion in the country.

Jointly these projects, and possibly others, had confirmed that Cleaner Production could be meaningfully applied in the Moldavian industrial sector, even though their

⁶⁰ Cleaner Production and Energy Efficiency in the Republic of Moldova: status report December 2007, Energy Savings International, Oslo, Norway, www.ensi.no/uploads/071219.lt.status_report_2007.pdf.

⁶¹ Building Capacities for Application of Pollution Prevention Strategies in Moldova, Czech Cleaner Production Centre, Prague, <http://www.ircon.cz/en/moldova-3> and www.cir.cz/history0/482715/1833872.

⁶² www.utm.md/master/en/index.html.

collective impact on the uptake of RECP in the sector had been relatively modest. Professional training appeared to have been most successful; also prior efforts had been invested in information and awareness activities and industry pilot projects. While some outputs had been produced, information on further RECP implementation is not existent. It appeared that in order to provide a solid foundation for promoting of RECP, more attention was needed to be paid to the monitoring of current implementation and benefits thereof.

In the absence of evidence of ongoing implementation or replication of CP in the country, the Government of the Republic of Moldova requested in 2008 the assistance of UNIDO to establish a National Cleaner Production Programme in Moldova. A project was formulated during 2008 and in 2009 the Government of the Czech Republic funded UNIDO to implement the first preparatory stage between June 2009 and December 2010. This preparatory stage confirmed the applicability and benefits of RECP in Moldova, and succeeded in bolstering interest from the national government and business sectors. It also revealed the need for further assistance for domestication (or customization) and institutionalization of RECP in the country, for which this project document was prepared based on inputs derived from consultations with business and government sectors, civil society and donor representatives.

In order to foster country ownership and built institutional capacity on RECP in the country a National executive board (NEB) was set up comprising governmental, enterprises, academia and civil society membership to advocate the NCPP-Moldova and oversight its activities.

The status of past CP related projects in Moldova was reviewed as part of the preparatory NCPP-Moldova activities and was completed in the mid of 2010 on the basis of available documents and follow up enquiries and on-site discussions with companies and experts involved.

Annex D: List of reference documents

Project planning and reporting documents⁶³

- UNIDO RECP programme concept for support to National cleaner production programme: Republic of Moldova 2011 – 2013, concept for discussion (November 2010).
- Project document “National Cleaner Production Programme (NCP): Republic of Moldova” (UE/MOL/10/x01), June 2011.
- 2012 Activity report.
- 2013 Progress report and 2014 Work plan.
- 2014 Annual progress report
- Minutes of the National executive board meetings held in 2011 – 2015.
- Sample records on recruitment of project staff, national and international experts.

Project outputs - Work stream 1 RECP capacity

- Website of Moldova NCPP: <http://www.ncpp.md/en>.
- Project brochure on National Cleaner Production Programme in the Republic of Moldova (2013).
- Project brochure on RECP clubs (2013).
- Records of outreach on various local, national and international events (National Green Growth Policy Dialogue, technical conference, EAP stakeholder consultations) (2012-2015)
- Sample of attendance records for RECP Club awareness raising events (e.g. Causeni on 2 Sept 2013, Ungheni on 19 Sept 2013, Causeni on 11 March 2015).
- Sample of attendance records for RECP training sessions.
- Samples of case study success stories (e.g. Agrofera-BM, Rhei-Vit Causeni branch, Doina Vin Stauceni, FEC).
- Conference publication of the Technical University of Moldova “Resource efficient and cleaner production in Moldova – Lessons Learnt” by Lucia Sop and Johannes Fresner (2014).
- Customised guideline on RECP replication through Regional RECP Clubs Model (2013).
- Customised guideline on RECP assessments in public buildings in Moldova (2013).

Project outputs - Work stream 2 RECP demonstration

- Extensive samples of RECP assessment reports produced for demonstration companies (2012-2015).
- Excel spreadsheet with RECP benefits assessed companies and club members in three regions 2012-2014 (version 12 June 2015).

⁶³ The listed Project activity/progress reports were produced for the National Executive Board and therefore purposely excluded financial details. Complementary donor reports have been provided to donor with financial details.

- Excel spreadsheet with final RECP results from assessments of public institutions (version 12 June 2015).

Project outputs - Work stream 3 policy and strategy

- Project document “Policy Measures to Promote Resource Efficient and Cleaner Production in the Republic of Moldova”, produced by Thomas Lindqvist, IIEE, Lund University, Sweden (2013).
- Consideration and communication records of proposals submitted to the National Environmental Strategy 2014- 2023 (as included in Annex 6 of the 2014 Annual Progress Report).
- Discussion document “Strategic priorities for RECP implementation in the Republic of Moldova” (March 2015).
- Proposals for “Policy Plan for RECP Strategy Promotion in the Republic of Moldova” (March 2015)
- Records of stakeholders’ consultations on RECP policy and strategy (21 Nov 2012 and 16 March 2015).
- Draft “Roadmap on RECP Strategy” for the Republic of Moldova (11 June 2015).
- Material and supporting communications for RECP policy briefing session (June 2015).

Project outputs – Overall

- Expressions of appreciations received for NCPP-Moldova activities from third parties (government, industry and professional associations)
 - See annex 2 in the project progress report Q1-Q2, 2012
 - <http://mediu.gov.md/index.php/serviciul-de-presa/noutati/938-lansarea-programului-national-de-producere-mai-pura>
 - <http://www.crungheni.md/news/?nid=9ccbcb68228f84cf371fda585ebf34c9>
 - <http://www.primaria.causeni.org/noutati/499-la-cueni-s-a-constituit-clubul-nu-risipi-.html>

Reference documents

- PRE-SME – Promoting resource efficiency in small & medium sized enterprises. Industrial training handbook. UNIDO/UNEP (2010).
- Enterprise-Level Indicators for resource efficiency and pollution intensity: a primer for small and medium sized enterprises, UNIDO/UNEP (2010).
- Good organization, management and governance practices: a primer for providers of services in resource efficient and cleaner production, UNIDO/UNEP, Vienna/Paris, Austria/France (2010).
- Nairobi declaration of the Global network for resource efficient and cleaner production in developing and transition countries (RECP net), Nairobi, 19 October 2011.
- UNIDO, Cleaner production toolkit (2006).

Annex E: Overview of key dates and project activities in 2012-2015

Year 2012

Table: Overview of key dates and project activities in 2012

Date	Location	Activity	Description
9-11 January 2012	Chisinau	Basic RECP training	Delivery of basic RECP training, combined with on-site guidance in food and construction materials companies
4 April 2012	Chisinau	NEB meeting	Activities report presented with focus on the training of national experts and startup of comprehensive RECP assessments in the enterprises/organizations
9-11 April	Chisinau	Follow up RECP training	Preliminary stages of the assessments had been presented, and their progress using the RECP methodology
22 May 2012	Chisinau	NCPP launching event	NCPP-Moldova launching provided an opportunity to learn at first-hand how enterprises, organizations, and government might benefit from the RECP
22 May 2012	Chisinau	NEB meeting	The main focus for the NEB has been the policy review, including selection of key policy areas to be reviewed, and planning for consultations
12 June 2012	Ungheni	Awareness raising and dissemination seminar	Presentations aimed at improving the understanding of RECP opportunities that can contribute to the sustainable development of the community through the RECP replication programme on municipal services.
13 July 2012	Chisinau	NEB meeting	Progress of NCPP Moldova activities over the 6 months 2012 reviewed
17-20 July 2012	Chisinau Ungheni Causeni	RECP follow up training	A combination of classroom training and supervised execution of RECP assessments for selected companies/organizations) has been conducted by the international expert with on-site guidance, measurements, and calculations.
8 August 2012	Causeni	Regional seminar on RECP awareness raising	Benefits from the implementation of RECP concept disseminated to improve understanding of RECP opportunities that can contribute to the sustainable development of the community

Annex E: Overview of key dates and project activities in 2012 - 2015

Date	Location	Activity	Description
27 September 2012	Chisinau	NEB meeting	The meeting agenda have included: (1) review of companies/organizations assessments, trainings; (2) discussions on the policy workshop, study tour; (3) status of the preparations for the re-plication program
4-6 October 2012	Causeni, Ungheni, Chisinau	RECP training follow up and coaching	Site visits at seasonal food companies, measurements, evaluations, practical recommendations have been done
21 November 2012	Chisinau	RECP consultation workshop	Views on development, implementation, enforcement of existing policies and regulations relevant to the RECP gathered from wide range of stakeholders from government, business and civil society
25 Nov – 1 Dec2012	Austria	Study tour of NEB, and enterprises	Local government meetings and company visits to better understand and learn from the RECP related international policy context

Year 2013Table: Overview of key dates and project activities in 2013⁶⁴

Date	Location	Activity	Description
26 March 2013	Chisinau	National executive board (NEB)	NEB reviewed 2012 activity report and 2013 work plan, and draft results from initial policy assessment were presented
5 April 2013	Chisinau	Donor monitoring visit	Delegation of Austrian development agency (ADA) visited FEC company (producer of prefabricated concrete building elements)
10-12 April 2013	Vienna (Austria)	Regional chapter meeting of RECPnet	NCPP director participated in kick off meeting for regional chapter, training in knowledge management and development of regional programme on RECP for low carbon industrial development
20-21 May 2013	Chisinau	Project manager monitoring visit	Review of achievements at Bucaria company, review and planning meetings with national expert teams on RECP Clubs and scaling up of RECP in public buildings
24 May 2013	Chisinau	International conference on energy efficiency, ecology and education	National experts of NCPP presented results of RECP assessments completed in 2012 in schools and kindergartens
2 September 2013	Causeni	RECP Club promotion	Awareness seminar for regional RECP Club
4-6 September 2013	Montreux (Switzerland)	Global RECP networking conference	NCPP Director participated in the global RECP networking conference
17-21 September	Chisinau	Advanced RECP training	Training focused on process monitoring and optimization, and included on-site demonstrations of use of monitoring equipment
19 September 2013	Ungheni	RECP Club promotion	Awareness seminar for regional RECP Club
2 October 2013	Causeni	RECP Club initiation	Presentation and hands on assignments with RECP indicators for participating enterprises
3 October 2013	Ungheni	RECP Club initiation	Presentation and hands on assignments with RECP indicators for participating enterprises

⁶⁴ Extracted from 2013 Progress Report and 2014 Work plan.

Annex E: Overview of key dates and project activities in 2012 - 2015

Date	Location	Activity	Description
24-30 October 2013	Chisinau	Introductory RECP training	Delivery of first intensive session of basic RECP assessment training, combined with on-site guidance in food and construction materials companies and complementary training on sound chemicals' management
20 November 2013	Ungheni	RECP Club (Module 1)	Presentation on RECP concepts and techniques and discussion of their applicability in participating enterprises
21 November 2013	Causeni	RECP Club (Module 1)	
22 November 2013	Chisinau	RECP =Club (Module 1)	

Year 2014Table: Overview of key dates and Project activities in 2014⁶⁵

Date	Location	Activity	Description
January 15 2014	Chisinau	RECP Club meeting	Presentation of RECP implementation benefits at the national level
January 31 2014	Chisinau	National executive board	NCPP annual progress presented at the NEB meeting
February 5 2014	Ungheni	RECP Club (Module 2)	Presentation on non-product output costs and approaches to environmental accounting discussed
February 6 2014	Causeni	RECP Club (Module 2)	
February 7 2014	Chisinau	RECP Club (Module 2)	
10-11 February 2014 (*)	Vienna	RECP Demonstration component – kick off meeting under EaP GREEN	NCPP director participated to the kick off meeting of UNIDO RECP demonstration component, and shared the experience on the NCPP set up and achievements
February 24- 25 2014 (**)	Chisinau	Low carbon production project monitoring mission	International expert was accompanied to monitor the achievements on the companies sites, and meetings with national experts under the low carbon production regional project frame
February 27 2014	Chisinau	National executive board (NEB)	NEB reviewed and endorsed 2013 progress report, and 2014-2015 NCPP work plan with recommendation for one year zero cost extension
March 4-6 2014 (**)	Vienna	Regional networking on RECP in the countries of South-Eastern Europe	NCPP director participated to the coordination workshop on the regional programme on RECP and contributed to the low carbon industrial development component
March 19	Causeni	RECP Club (Module 3)	Presentation on need for and opportunities of energy efficiency at the company level and data collection discussed
March 20	Ungheni	RECP Club (Module 3)	
March 21	Chisinau	RECP Club (Module 3)	

⁶⁵ Extracted from 2014 Annual Progress Report.

Annex E: Overview of key dates and project activities in 2012 - 2015

Date	Location	Activity	Description
March 27, 2014 (*)	Chisinau	Seminar green economy indicators	NCPP director participated to the seminar concerning presentation of the draft report on the progress towards green economy, and indicators to measure the progress at the country level
8 April 2014	Chisinau	High level event, Three key ministers signed declaration to coordinate the efforts to foster green growth	Four NCPP staff participated and contributed to Moldova's Green development high level event with presentations and input to the side event
10-11 April 2014	Chisinau	International ecology, and energy efficiency conference	NCPP staff participated to the Conference held at TUM and presented RECP benefits at the national level, and contributed an article to the conference proceedings
21-25 April 2014 (**)	Graz, Austria	Advanced training on low carbon (LC)	Two NCPP associate experts participated in four day training in Austria, and presented the results of low carbon assessments undertaken in Moldova
28 April 2014	Causeni	RECP Club (Module 4)	Presentations and discussions on materials efficiency, data collection, and RECP options identification
29 April 2014	Ungheni	RECP Club (Module 4)	
30 April 2014	Chisinau	RECP Club (Module 4)	
14-15 May 2014 (*)	Chisinau	Inception seminar on sustainable public procurement (SPP)	NCPP director participated, and contributed to the seminar with suggestions on RECP Policy promotion while implementing SPP
02 June 2014	Ungheni	RECP Club (Module 5)	Basics of material resource management and waste management. Examples of good practices from Moldovan enterprises
03 June 2014	Chisinau	RECP Club (Module 5)	
04 June 2014	Causeni	RECP Club (Module 5)	
06 June 2014 (*)	Chisinau	Seminar UNEP on green economy policy	NCPP director participated to the strategic policy setting workshop for green economy in Moldova
13 June 2014 (*)	Chisinau	Seminar OECD on environmentally harmful subsidies	NCPP director participated to the seminar on economic instruments for managing environmentally harmful products in Moldova

Annex E: Overview of key dates and project activities in 2012 - 2015

Date	Location	Activity	Description
26 June 2014 (*)	Chisinau	Seminar OECD indicators for green economy	NCPP director participated to the seminar on the outline draft report presentation and indicators to measure progress towards green economy in Moldova
23-29 June 2014	Chisinau	EU sustainable energy week, Chisinau,	NCPP staff presented RECP concept during the whole week with posters and flyers in Stefan cell M – Central Park
21 July 2014	Ungheni	RECP Club (Module 6)	Presentation on chemicals management, including an exercise on material safety data sheet, chemicals handling
22 July 2014	Causeni	RECP Club (Module 6)	
23 July 2014	Chisinau	RECP Club (Module 6)	
12 August 2014	Ungheni	RECP Club (Module 7)	Action planning. Tools for monitoring the benefits of implemented RECP options. Example of action plan/monitoring plan
13 August 2014	Chisinau	RECP Club (Module 7)	
14 August 2014	Causeni	RECP Club (Module 7)	
6 October 2014(*)	Chisinau	UNEP workshop on Sustainable public procurement (SPP)	NCPP director participated to the workshop and contributed to the prioritization of main product groups to be trailed as SPP in Moldova.
13 October 2014	Portoroz, Slovenia	RECP Net regional chapter for Eastern Europe, Caucasus and Central Asia meeting	NCPP-Moldova as a member of the RECPnet has participated to the meeting that aimed at strengthening RECP capacity in European region
14-15 October 2014	Portoroz	European roundtable on sustainable consumption and production (ERSCP)	NCPP-Moldova representative made presentation on the achievements during 2010-2014 and lessons learnt from RECP implementation in the republic of Moldova
16 October 2014	Portoroz	RECP Demonstration component meeting under EaP GREEN	NCPP-Moldova representative participated and contributed to planning and coordination of the EaP GREEN demonstration activities
6 November	Chisinau	National executive board meeting	Review progress Q1-3 in implementation of NCPP
December 16 2014(*)	Chisinau	UNEP workshop on sustainable public procurement (SPP), under EaP GREEN	NCPP representative participated to the workshop aimed to agree on the SPP policy and action plan for the country

Date	Location	Activity	Description
<p>Note:</p> <p>(*) Contribution to the regional project on Greening of Economies of the Eastern Partnership region (EaP GREEN) in Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine, financed by European Commission, with co-financing from amongst others Government of Slovenia and Development Bank of Austria. The project is co-implemented by Organization for Economic Cooperation and Development (OECD), United Nations Environment Programme (UNEP), United Nations Economic Commission for Europe (UNECE) and United Nations Industrial Development Organization (UNIDO).</p> <p>(**) Contribution to regional RECP technical cooperation and networking project aimed at fostering exchange and application of international best practices in low carbon production, sustainable tourism and sound chemicals management, in Albania, Macedonia, Montenegro, Moldova and Serbia. The project is implemented by the United Nations Industrial Development Organization (UNIDO) with funding support of the Governments of Slovenia and Austria.</p>			

Year 2015Table: Overview of key dates and project activities in 2015
(January to 30 June)

Date	Location	Activity	Description
23 January 2015	Balti	RECP replication model promotion, First module	RECP Club launching event, awareness raising seminar delivered to the enterprises and mayors officers
3-5 March 2015	Chisinau	RECP basics training	New trainees have attended introductory course on RECP basics held by the international expert
10 March 2015	Ungheni	RECP Club (Module 1)	Presentation on RECP concepts /techniques , and examples of RECP implementation results at the Club members of the first Club cycle
11 March 2015	Causeni	RECP Club (Module 1)	Presentation on RECP concepts /techniques, and examples of RECP implementation results at the Club members of the first Club cycle
9-11 March 2015	Chisinau	RECP follow up training under EaP Green	Guidance to the experts on the companies sites on concluding the RECP assessments
16 March 2015	Chisinau	RECP Policy consultation workshop	Relevant stakeholders views gathered, and as a result a roadmap on way forward agreed on
17 March 2015	Chisinau	National executive board (NEB) meeting	NEB reviewed and endorsed 2014 activity report and the work plan until September2015. The RECP Policy component steps undertaken presented
23-28 March	Tbilisi, Georgia	RECP training coordination meeting	Three NCPP staff participated to the training and coordination meeting under EaP Green
23 April 2015	Ungheni	RECP Club (Module 2)	Presentation on non-product output costs and approaches to environmental accounting
27 April – May 2 2015	Chisinau, Orhei, Balti, Ungheni	Follow up training in RECP basics	Guidance to the trainees on the companies site for the RECP options identification
29 April 2015	Balti	RECP Club (Module 2)	Presentation on Non-Product Output costs and approaches to environmental accounting
8 May 2015	Ungheni	RECP Club (Module 3)	Presentation on need for and opportunities of Energy Efficiency at the company level and data collection discussed

Annex E: Overview of key dates and project activities in 2012 - 2015

Date	Location	Activity	Description
June 16	Chisinau	RECP policy training	Key RECP concepts and policies introduced to policy makers/relevant stakeholders, and practical ways for their application in Moldova discussed.
June 17 2015	Chisinau	RECP consultation Dialogue under EaP Green	Expertise/insights of stakeholders representing government, business gathered to customize RECP to national context
June 17 2015	Chisinau	NEB meeting	NCPP progress during January-June 2015, including status of RECP policy development, outlook until Sept 2015/Dec 2016 presented.
June 19 2015	Chisinau	Donor monitoring visit	Delegation of European Commission, and EaP Green partners visited Bonss Offices - a print shop company that is applying RECP concept.
15-22 June 2015	Chisinau, Orhei	Sustainable energy week in Moldova	RECP concept application presented during the whole week with posters/flyers at the outdoors events in Chisinau Central Park, and Orhei Municipality

Annex F: Persons and organizations met

#	Institution	Mr./Ms.	Position
Members of national executive board			
1	Ministry of environment	HE Mr. Lazar Chirica	Vice-minister of environment
2	Ministry of environment	Ms. Maria Nagornii	International relations department
3	Ministry of economy	Mr. Oleg Izvoreanu	Energy efficiency and renewable directorate
4	Chamber of commerce and industry	Mr. Mihai Bilba	Head of international relations & business events department
5	Academy of science	Mr. Mihai Tirsu	Director
6	Academy of science	Mr. Ilie Timofti	Senior, scientific secretary
7	Academy of science	Mrs. Natalia Timofti	Scientific research
Donor representation			
8	Austrian Development Agency	Mr. Constantin Mihailescu	Water and Sanitation Expert
Industries and municipalities			
9	Eurocomplast, Ungheni	Mr. Nicolae Tarus	Director / owner
10	AVE waste management, Ungheni	Mr. Sergiu Nanu	Chief engineer
11	Ungheni municipality – City Hall	Mr. Dumitru Radu	Vice-mayor
12	Panilino, bakery, Chisinau	Mr. Valeriu Surguci	Chief engineer
13	M.Patrunjel, Causeni cons. mat.prod	Mr. Patrunjel Sergiu	Manager
14	Orhei-Vit Causeni, fruit/veg processor	Mr. Valentin Uncu	Director
Project team			
15	NCPP-Moldova at TUM	Ms. Lucia Sop	National programme director
16	NCPP-Moldova at TUM	Mr. Victor Gropa / Mr. Tudor Radilov	Coordinator from TUM
17	NCPP-Moldova at TUM	Mr. Victor Pogora	Dean energy faculty, TUM
18	NCPP-Moldova at TUM	Mr. Ion Nita	Technical expert
19	UNIDO	Mr. Rene van Berkel	Project manager
20	RECP Club Ungheni	Mr. Alexandru Maler	Coordinator RECP Club - Ungheni
21	RECP Club Chisinau	Mr. Daniel Scalatchi	Coordinator RECP Club – Chisinau
22	RECP Club Causeni	Mr. Valentin Uncu	Coordinator RECP Club – Causeni
23	Trained technical expert	Mr. Andrei Binzari	RECP associated expert
24	Trained technical expert	Mr. Nastasiu Anatolie	RECP associated expert

#	Institution	Mr./Ms.	Position
25	Short term national experts	Mr. Victor Moroz	Policy expert
26	Short term national experts	Mr. Valentin Bobeica	Policy expert
27	Romanian centre for sustainable consumption and production	Ms. Aida Szilagyí	RECP training and implementation
28	Stenum	Mr. Johannes Fresner	RECP methods and techniques
29	Lund University	Mr. Thomas Lindhqvist	RECP Policy