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ENVIRONMENTAL REVIEW CHECKLIST FOR IDENTIFYING POTENTIAL ENVIRONMENTAL IMPACTS OF PROJECT ACTIVITIES AND PROCESSES:

Establishment of the Resource and Logistics Center for Bioenergy Development

Prepared in the framework of the Cooperative Agreement No.AID-121-A-13-00002 of May 23, 2013, between USAID and All-Charitable Organization “Municipal Development Institute” for implementation of the USAID Project “Local Alternative Energy Solutions in Myrhorod”

Subtask 2.4

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Views of the authors represented in this publication do not necessarily reflect the opinion of the US Agency for International Development or that of the United States Government

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Executive Summary

This document, “*Environmental Review Checklist for identifying potential environmental impacts of project activities and processes: establishment of the Resource and Logistics Center for Bioenergy Development*”, was prepared by Municipal Development Institute in the framework of implementation of the subtask 2.4 of the LAESM Project Work Plan 2014 that provides for the establishment of the Resource and Logistics Center (RLC) for Bioenergy Development in Myrhorod.

The RLC will be located in the room 6 in the building of Myrhorod Municipality on 17, Nezalezhnosti St. This ERC was prepared to identify the impacts of the proposed room renovation works on the environment.

The Environmental Review Checklist for identifying potential environmental impacts of project activities and processes (ERC) is intended for use mainly by implementing partners to: assess activity-specific baseline conditions, including applicable environmental requirements; identify potential adverse environmental effects associated with planned activity(s) and processes; and develop environmental mitigation and monitoring plans (EMMPs) that can effectively avoid or adequately minimize the identified effects.

Environmental Review Checklist for identifying potential environmental impacts of project activities and processes

The Environmental Review Checklist for Identifying Potential Environmental Impacts of Project Activities and Processes (ERC) is intended for use mainly by implementing partners to: assess activity-specific baseline conditions, including applicable environmental requirements; identify potential adverse environmental effects associated with planned activity(s) and processes; and develop environmental mitigation and monitoring plans (EMMPs) that can effectively avoid or adequately minimize the identified effects. This ERC can also be substituted for other ERC versions that may have been attached to project initial environmental examinations (IEE). If implementing partners are in doubt about whether a planned activity requires preparation of an ERC, they should contact their Contracting Officer's Representative (COR)/Agreement Officer's Representative (AOR) for clarification. *(When preparing the checklist, please indicate "not applicable" for items that have no bearing on the activity.)*

A. Activity and Site Information

Project Name: <i>(as stated in the triggering IEE)</i>	Local Alternative Energy Solutions in Myrhorod (LAESM)
Mission/Country:	Ukraine
DCN of Triggering IEE:	
Activity/Site Name:	Establishment of the Resource and Logistics Center for Bioenergy Development and Public Education and Information Center
Type of Activity:	Office set up, including renovation of premises, purchase of equipment and furniture.
Name of Reviewer and Summary of Professional Qualifications:	
Date of Review:	

B. Activity Description

1. Activity purpose and need

Renovation of the room and installation of necessary equipment in the Myrhorod Municipality building necessary for the establishment of the Resource and Logistics Center for Bioenergy Development and a Public Education and Information Center.

The Subtask 2.4 of the LAESM Project Work Plan 2014 provides for the establishment of the Resource and Logistics Center (RLC) in Myrhorod for working with farmers, agro-producers and other enterprises for which straw is an agriculture waste.

The Resource and Logistics Center will facilitate the implementation of the pilot bio-boiler project under which locally available biomass will be used as a fuel and a necessary logistics infrastructure will be established for regular supplies of biomass for the bio-boiler; accumulate and disseminate information about best practices regarding the renewable sources of energy and the progress of the pilot bio-boiler project; create the environment for the sustainable development of the local community and prepare the field for replication of innovation projects, which were initiated by the LAESM Project, on the basis of PPPs;

7. Existing or planned certifications, e.g., ISO 14001 EMS, ISO 9000, HCCP, SA 8000, Global Gap, Environmental Product Declarations, Eco Flower, EcoLogo, Cradle to Cradle, UL Environment, GREENGUARD, Fair Trade, Green Seal, LEED, or various Forest Certifications

N/A

8. Site map, e.g., provide an image from Google Earth of the location

Location of the Myrhorod Municipality building is shown on Fig. 3.

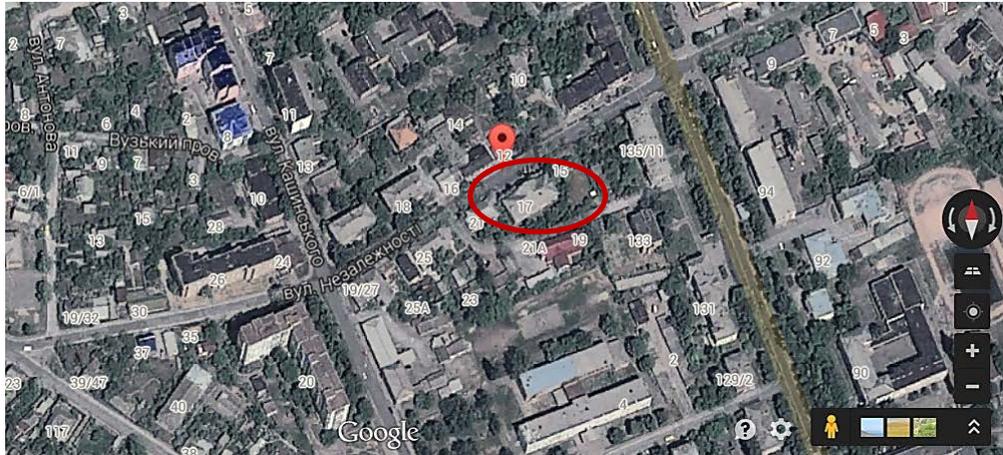


Fig. 3

9. Photos of site



C. Activity-Specific Baseline Environmental Conditions

1. Population characteristics

The population of the city and the area under the city territory is given in Table 1.

Table 1

Dynamics of the population of Myrhorod

Year	Population, thousand persons	Area of city, km ²	Population density, thousand persons/km ²
01/01/ 2006	41,8	20	2,09
01/01/ 2010	41,4	30	1,379
01/01/ 2013	41,109	30	1,37

The Population of Myrhorod increases significantly in summer and reaches up to 48.9 thousands of people because many people come to Myrhorod for health reasons.

As January 1, 2014, the housing stock amounted to over 900.0 thousands m² of the total area, including 427.1 thousands m² of apartments (47.1 %), single-family houses - 479.9 thousands m² (52.9 %). The number of apartments (houses) in the city is 17.5 thousands, including the estate housing stock - 8.9 thousands homes in the multi-residential sector - 8,6 thousands apartments.

The average housing provision per capita is 22.0 m².

2. Geography

Poltava Oblast', including Myrhorod, is located in the central Ukraine in the steppe zone with a temperate continental climate. The total area of Poltava Oblast is 28.75 km² (4.5% of the territory of Ukraine); including 9.9% of the forest and other wooded areas, 5.16% of the surface water, 75.38% of the agricultural land, including 61.63% of the arable land.

Poltava Oblast lies in the southern section of the forest-steppe that reaches the Dnieper Lowland. It is an undulating plain that descends to the Dnieper River from an elevation of 170–200 m in the northeast to 60–100 m in the southwest. Its major rivers include the Dnieper River and its tributaries, the Psol River, the Sula River, and the Vorskla River. Its soils are mainly chernozem, although near the Dnieper River podsol chernozem (black earth) as well as alkaline lands and saline soils can be found. The region's natural steppe flora has largely disappeared and been supplanted by cultivation. Its forests are mainly oak, but also contain stands of ash, maple, elm, and hornbeam. On the sandy terraces formed by rivers there are also pine, birch, and alder. The climate is continental, with average January temperatures of – 5.5 °C to –7.5 °C and July temperatures of 20.9 °C to 21.7 °C. The average annual precipitation is 430–560 mm.

The region has deposits of [iron ore](#), natural gas and petroleum, peat, clay, and stone suitable for construction.

3. Natural resources, e.g., nearby forest/protected areas, ground and surface water resources

Myrhorod is one of the most popular health resorts in Ukraine famous for its mineral waters. Presently, the local community is implementing a local program according to which the

natural territory of Myrhorod will be announced a National Spa. The proposed activity doesn't impact natural resources.

4. Current land use

According to the General Plan of Myrhorod, the current land use in Myrhorod includes the following categories: lands under public and commercial facilities; lands for recreation and spa use, lands for the transport infrastructure, lands for industrial purposes and needs, a residential zone, including private housing and apartment blocks. The proposed activity doesn't impact the current land use situation.

5. Proximity to public facilities, e.g. schools, hospitals, etc.

N/A

6. Other relevant description of current environmental conditions in proximity to the activity

N/A

D. Legal, Regulatory, and Permitting Requirements

1. National environmental impact assessment requirements for this activity

The national regulations don't require the environmental impact assessment for the renovation of specific premises. The general condition and demands regarding the quality of building and finishing materials is regulated by the State Construction Norms and Rules (DBN) relative the renovation of the office and public premises.

2. Applicable national or local permits for this activity, responsible party, and schedule for obtaining them

Permit Type	Responsible party	Schedule
Zoning	N/A	N/A
Building/Construction – renovation work	Myrhorod Municipality	Already available
Source Material Extraction	N/A	N/A
Waste Disposal	N/A	N/A
Wastewater	N/A	N/A
Storm Water Management	N/A	N/A
Air Quality	N/A	N/A
Water Use	N/A	N/A
Historical or Cultural Preservation	N/A	N/A
Wetlands or Water bodies	N/A	N/A
Threatened or Endangered Species	N/A	N/A
<i>Other</i> Memorandum of Understanding and Cooperation (MoU) in the framework of the implementation of the technical assistance USAID Project “Local Alternative Energy Solutions in Myrhorod”	All-Ukrainian Charitable Organization “Municipal Development Institute” and Myrhorod Municipality	Already available

3. Additional National, European Union, or other international environmental laws, conventions, standards with which the activity might be required to comply

- a. Air emission standards
- b. Water discharge standards
- c. Solid waste disposal or storage regulations
- d. Hazardous waste storage and disposal
- e. Historical or cultural preservation
- f. Other

N/A

E. Engineering Safety and Integrity

(for Sections E. and F., provide a discussion for any of the listed issues that are likely to have bearing on this activity)

1. Will the activity be required to adhere to formal engineering designs/plans? Have these been or will they be developed by a qualified engineer? **YES**
2. Do designs/plans effectively and comprehensively address:
 - a. Management of storm water runoff and its effects? **NO**
 - b. Reuse, recycling, and disposal of construction debris and by-products? **NO**
 - c. Energy efficiency and/or preference for renewable energy sources? **YES**

Activity realization will support the development and implementation of the Project “Local alternative energy solutions in Myrhorod” (LAESM).

- d. Pollution prevention and cleaner production measures? **NO**
- e. Maximum reliance on green building or green land-use approaches? **YES**

Activity realization will meet basic green building requirement in the part of application of certified non-toxic and asbestos-free materials and technologies.

- f. Emergency response planning? **NO**
 - g. Mitigation or avoidance of occupational safety and health hazards? **NO**
 - h. Environmental management of mobilization and de-mobilization? **NO**
 - i. Capacity of the host country recipient organization to sustain the environmental management aspects of the activity after closure and handover? **NO**
3. Are there known geological hazards, e.g., faults, landslides, or unstable soil structure, which could affect the activity? If so, how will the project ensure structural integrity? **NO**
 4. Will the site require grading, trenching, or excavation? Will the activity generate borrow pits? If so, how will these be managed during implementation and closure? **NO**
 5. Will the activity cause interference with the current drainage systems or conditions? Will it increase the risk of flooding? **NO**
 6. Will the activity interfere with above- or below-ground utility transmission lines, e.g., communications, water, sewer, or natural gas? **NO**
 7. Will the activity potentially interfere with vehicle or pedestrian traffic? **NO**

8. Does the activity increase the risk of fire, explosion, or hazardous chemical releases? **NO**
9. Does the activity require disposal or retrofitting of polychlorinated biphenyl-containing equipment, e.g., transformers or florescent light ballasts? **NO**

F. Environment, Health, and Safety Consequences

1. Potential impacts to public health and well-being

- a. Will the activity require temporary or permanent property land taking? **NO**
- b. Will activities require temporary or permanent human resettlement? **NO**
- c. Will area residents and/or workers be exposed to pesticides, fertilizer, or other toxic substances, e.g., as a result of farming or manufacturing? If so, how will the project: **NO**
 - i. Ensure that these chemicals do not contaminate ground or surface water? **NO**
 - ii. Ensure that workers use protective clothing and equipment to prevent exposure? **NO**
 - iii. Control releases of these substances to air, water, and land? **NO**
 - iv. Restrict access to the site to reduce the potential for human exposure? **NO**
- d. Will the activity generate pesticide, chemical, or industrial wastes? Could these wastes potentially contaminate soil, groundwater or surface water? **NO**
- e. Will chemical containers be stored at the site? **NO**
- f. Does the activity remove asbestos-containing materials or use of building materials that may contain asbestos, formaldehyde, or other toxic materials? Can the project certify that building materials are non-toxic? If so, how will these wastes be disposed of? **YES.**

For implementation of the activity there were ordered and will be purchased building materials, which have hygienic certificates, their non-toxicity and asbestos-free nature confirmed.

- g. Will the activity generate other solid or hazardous wastes such as construction debris, dry or wet cell batteries, florescent tubes, aerosol cans, paint, solvents, etc.? If so, how will this waste be disposed of? **YES**

During the renovation works solid waste can be generated: construction debris, remnants of packaging materials, paints, solvents, aerosol cans, etc. This waste will be collected in a container with a lid. After the works are finished, the waste will be disposed on a local landfill. The estimated volume of waste will be less than 0,5 m³.

- h. Will the activity generate nontoxic, nonhazardous solid wastes (subsequently requiring land resources for disposal)? **NO**
- i. Will the activity pose the need to handle and dispose of medical wastes? If so, describe measures of ensuring occupational and public health and safety, both onsite and offsite. **NO**
- j. Does the activity provide a new source of drinking water for a community? If so, how will the project monitor water quality in accordance with health standards? **NO**
- k. Will the activity potentially disturb soil contaminated with toxic or hazardous materials? **NO**

1. Will activities, e.g., construction, refurbishment, demolition, or blasting, result in increased noise or light pollution, which could adversely affect the natural or human environment?
YES

During 10-14 days of the renovation works, light pollution and noise can slightly increase.

2. Atmospheric and air quality impacts

- a. Will the activity result in increased emission of air pollutants from a vent or as fugitive releases, e.g., soot, sulfur dioxide, oxides of nitrogen, volatile organic compounds, methane? **NO**
- b. Will the activity involve burning of wood or biomass? **NO**
- c. Will the activity install, operate, maintain, or decommission systems containing ozone depleting substances, e.g., freon or other refrigerants? **NO**
- d. Will the activity generate an increase in carbon emissions? **NO**
- e. Will the activity increase odor and/or noise? **YES**

During 10-14 days of the renovation works, odor and noise can slightly increase.

3. Water quality changes and impacts

- a. How far is the site located from the nearest river, stream, or lake? **NO**
- b. Will the activity disturb wetland, lacustrine, or riparian areas? **NO**
- c. What is the depth to groundwater at the site? **NO**
- d. Will the activity result in increased ground or surface water extraction? If so, what are the volumes? Permit requirements? **NO**
- e. Will the activity discharge domestic or industrial sewage to surface, ground water, or publicly-owned treatment facility? **NO**
- f. Does the activity result in increased volumes of storm water run-off and/or is there potential for discharges of potentially contaminated (including suspended solids) storm water? **NO**
- g. Will the activity result in the runoff of pesticides, fertilizers, or toxic chemicals into surface water or groundwater? **NO**
- h. Will the activity result in discharge of livestock wastes such as manure or blood into surface water? **NO**
- i. Does the site require excavation, placing of fill, or substrate removal (e.g., gravel) from a river, stream or lake? **NO**

4. Land use changes and impacts

- a. Will the activity convert fallow land to agricultural land? **NO**
- b. Will the activity convert forest land to agricultural land? **NO**
- c. Will the activity convert agricultural land to commercial, industrial, or residential uses?
NO

- d. Will the activity require onsite storage of liquid fuels or hazardous materials in bulk quantities? **NO**
- e. Will the activity result in natural resource extraction, e.g., granite, limestone, coal, lignite, oil, or gas? **NO**
- f. Will the activity alter the viewshed of area residents or others? **NO**

5. Impacts to forestry, biodiversity, protected areas and endangered species

- a. Is the site located adjacent to a protected area, national park, nature preserve, or wildlife refuge? **NO**
- b. Is the site located in or near threatened or endangered (T&E) species habitat? Is there a plan for identifying T&E species during activity implementation? If T&E species are identified during implementation, is there a formal process for halting work, avoiding impacts, and notifying authorities? **NO**
- c. Is the site located in a migratory bird flight or other animal migratory pathway? **NO**
- d. Will the activity involve harvesting of non-timber forest products, e.g., mushrooms, medicinal and aromatic plants (MAPs), herbs, or woody debris? **NO**
- e. Will the activity involve tree removal or logging? If so, please describe. **NO**

6. Historic or cultural resources

- a. Are there cultural or historic sites located at or near the site? If so, what is the distance from these? What is the plan for avoiding disturbance or notifying authorities? **NO**
- b. Are there unique ethnic or traditional cultures or values present in the site? If so, what is the applicable preservation plan? **NO**

G. Further Analysis of Recommended Actions

(if the applicable IEE requires the use of ERCs to perform further analysis of recommended actions, then check the appropriate box below. If this analysis is not required, then skip this and proceed with Section H. If required by the IEE, the ERC shall be copied to the Bureau Environmental Officer (BEO)).

- 1. Categorical Exclusion:** The activity is not likely to have an effect on the natural or physical environment. No further environmental review is required*.
- 2. Negative Determination with Conditions:** The activity does not have potentially significant adverse environmental, health, or safety effects, but may contribute to minor impacts that can be eliminated or adequately minimized by appropriate mitigation measures. EMMPs shall be developed, approved by the Mission Environmental Officer (MEO) (and the BEO if required by the IEE) prior to beginning the activity, incorporated into workplans, and then implemented. See Sections H and I below*.
- 3. Positive Determination:** The activity has potentially significant adverse environmental effects and requires further analysis of alternatives, solicitation of stakeholder input, and incorporation of environmental considerations into activity design. A Scoping Statement must be prepared and be submitted to the BEO for approval. Following BEO approval an Environmental Assessment (EA) will be conducted. The activity may not be implemented until the BEO clears the final EA. For activities related to the procurement, use, or training related to pesticides, a PERUSAP will be prepared for

BEO approval.

4. Activity Cancellation: The activity poses significant and unmitigable adverse environmental effects. Adequate EMMPs cannot be developed to eliminate these effects and alternatives are not feasible. The project is not recommended for funding.

***Note regarding applicability related to Pesticides (216.2(e):** The exemptions of §216.2(b)(1) and the categorical exclusions of §216.2(c)(2) *such as technical assistance, education, and training* are not applicable to assistance for the procurement or use of pesticides.

H. EMMPs

(Using the format provided below, or its equivalent, list the processes that comprise the activity, then for each, identify impacts requiring further consideration, and for each impact describe the mitigation and monitoring measures that will be implemented to avoid or adequately minimize the impacts. All environment, health, and safety impacts requiring further consideration, which were identified in Section F., should be addressed)

1. Activity-specific environmental mitigation plan (Upon request, the MEO may be able to provide your project with example EMMPs that are specific to your activity).

Processes	Identified Environmental Impacts	Do the Impacts Require Further Consideration?	Mitigation Measures	Monitoring Indicators
<i>Office room renovation</i>	<i>During 10-14 days of the renovation activity, the pollution and noise may slightly increase</i>	NO <i>Pollution prevention is not feasible and practical Does not pose a risk because of low frequency and duration</i>	N/A	N/A
<i>Office room renovation - finishing works</i>	<i>During 10-14 days of the renovation activity, the odor may slightly increase</i>	NO <i>Pollution prevention is not feasible and practical Does not pose a risk because of low duration</i>	N/A	N/A
<i>Office room renovation – finishing works</i>	<i>During the renovation works, solid waste may be generated: construction debris, remnants of packaging materials, paints, solvents, aerosol cans, etc.</i>	NO <i>Pollution prevention is not feasible and practical Does not pose a risk because of low duration and low volume. This waste will be collected in a</i>	N/A	N/A

Processes	Identified Environmental Impacts	Do the Impacts Require Further Consideration?	Mitigation Measures	Monitoring Indicators
		<i>container with a lid and after the works are finished the waste will be disposed on the city landfill. The estimated volume of waste will be less than 0,5 m³.</i>		
<i>Office room renovation – purchase of materials and equipment</i>	<i>The building and finishing materials have been ordered for the renovation works.</i>	<i>NO Does not pose a risk because of low duration and low volume. Purchased will be the materials, which have hygienic certificates, and their non-toxicity and asbestos-free nature confirmed.</i>	N/A	N/A

2. Activity-specific monitoring plan.

Monitoring Indicators	Monitoring and Reporting Frequency	Responsible Parties	Records Generated
<i>Specify indicators to (1) determine if mitigation is in place and (2) successful (for example, visual inspections for seepage around pit latrine; sedimentation at stream crossings, etc.)</i>	<i>For example: “Monitor weekly, and report in quarterly reports. If XXX occurs, immediately inform USAID COR/AOR.”</i>	<i>Separate parties responsible for mitigation from those responsible for reporting, whenever appropriate,</i>	<i>If appropriate, describe types of records generated by the mitigation, monitoring, and reporting process.</i>
N/A	N/A	N/A	N/A

I. Certification of No Adverse or Significant Effects on the Environment

I, the undersigned, certify that activity-specific baseline conditions and applicable environmental requirements have been properly assessed; environment, health, and safety impacts requiring further consideration have been comprehensively identified; and that adverse impacts will be effectively avoided or sufficiently minimized by proper implementation of the EMMP(s) in Section G. If new impacts requiring further consideration are identified or new mitigation measures are needed, I will be responsible for notifying the USAID COR/AOR, as soon as practicable. Upon completion of activities, I will submit a *Record of Compliance with Activity-Specific EMMPs* using the format provided in ERC Annex 1 or its equivalent.

Implementer Project Director/COP *Ruslan Tormosov*

Date

G. Approvals:

USAID COR/AOR *Maria Garastovskaya*

Date

Mission Environmental Officer

Date

Distribution:

- Project Files
- Bureau Environmental Officer

Annex 1. Record of compliance with activity-specific Environmental Mitigation and Monitoring Plans (EMMPs)

Subject:	<i>Site or Activity Name/Primary Project Name/IEE DCN Number</i>
To:	<i>COR/AOR/Activity Manager Name</i>
Copy:	<i>Mission Environmental Officer Name</i>
Date:	

The [name of the implementing organization] has finalized its activities at the [site name] to [describe activities and processes that were undertaken]. This memorandum is to certify that our organization has met all conditions of the EMMPs for this activity. A summary of the how mitigation and monitoring requirements were met is provided below.

1. Mobilization and Site Preparation
2. Activity Implementation Phase
3. Site Closure Phase
4. Activity Handover

Sincerely,

Implementer Project Director/COP Name

Date

Approved:

USAID/COR/AOR/Activity Manager Name

Date

Distribution:

- Project Files
- MEO
- Bureau Environmental Officer