



Environmental and Social Requirement 3

# Resource efficiency and pollution prevention and control



# Resource efficiency and pollution prevention and control

## Introduction

1. This Environmental and Social Requirement (ESR) outlines a project-level approach to climate impacts and greenhouse emissions, resource management and pollution<sup>36</sup> prevention and control, including plastic waste. It builds on the mitigation hierarchy, the principle that environmental damage should be rectified at its source, as a priority, and the “polluter pays” principle. It recognises the disproportionate impact of pollution on women, children and vulnerable people. The project-related risks and impacts associated with resource use and the generation of waste and emissions need to be assessed in the context of project location and local environmental and social conditions. Appropriate measures, such as Best Available Techniques (BAT) and good international practice (GIP), should be adopted to optimise resource and energy use, secure GHG reductions and efficiently prevent and control pollution.
2. This ESR recognises the transition to a circular economy<sup>37</sup> and/or resource recovery, where usable and valuable products can be created or derived from what has been previously viewed as waste.<sup>38</sup>
3. This ESR also recognises the importance of combating climate change, the need to support low-emission and climate-resilient development and the importance of halting and reversing biodiversity loss, particularly where loss is due to pollution. Ways in which to conserve biodiversity and ecosystem services are addressed in ESR 6.
4. This ESR is based on the do-no-significant-harm principle and outlines the project requirements to ensure an integrated approach to resource efficiency, pollution prevention and control of emissions to air, water and land, noise pollution, radiation, prevention of accidents, as well as waste management and the safe use of hazardous substances and pesticides, avoiding the shift of pollution from one environmental medium to another.

## Objectives

5. The objectives of this ESR are to:
  - adopt a mitigation hierarchy approach to addressing adverse impacts on human health and the environment arising from the resource use and pollution released from the project
  - avoid, minimise and manage project-related GHG emissions
  - avoid, minimise and manage the risks and impacts associated with hazardous substances, single-use plastics and materials, including pesticides and microorganisms, outline the safe use of such materials and alternatives to such use and, if feasible, phase out the use of hazardous substances and pesticides
  - identify, where feasible, project-related opportunities for resource efficiency improvements

<sup>36</sup> The term “pollution” refers to both hazardous and non-hazardous chemical pollutants in the solid, liquid or gaseous phases and includes other components, such as thermal discharge to water, emissions of short- and long-lived climate pollutants, contamination of environmental media (including soil, air and water), nuisance odours, noise, vibration, radiation, electromagnetic energy and potential visual impacts, including light.

<sup>37</sup> As outlined in the European Commission’s Circular Economy Package.

<sup>38</sup> As defined by Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (EU Waste Framework Directive).

- outline the client's responsibility to ensure an integrated approach to resource efficiency, pollution prevention and control of emissions and discharges, and plastic waste reduction, as well as waste management
- outline the client's responsibilities with respect to climate change mitigation and adaptation
- promote the transition to a circular economy through the development and use of existing and/or new business models that seek to increase circularity (the value of products, materials and other resources is maintained for as long as possible), which can deliver substantial material savings throughout value-chain and production processes, generate extra value and unlock economic opportunities.

## Scope of application

6. This ESR applies to all projects directly financed by the EBRD as established in the Environmental and Social Policy. The client will, as part of its environmental and social assessment process, identify the relevant requirements of this ESR and how they will be addressed and managed throughout the project lifecycle. The implementation of the actions necessary to meet the requirements of this ESR will be managed under the client's overall environmental and social management system (ESMS) and the project-specific environmental and social management plan (ESMP), as well as relevant disclosures and reporting frameworks, as applicable.

## Requirements

### Resource efficiency and circular economy

7. The environmental and social assessment process will identify and assess the effectiveness and efficiency of the project's use of materials and natural resources (such as land, soil, water and biodiversity), waste management practices and energy use. The assessment will be done in line with GIP and focus on production processes and the impacts on the environment of resource use.
8. The client will adopt technically and financially feasible<sup>39</sup> and cost-effective<sup>40</sup> measures to minimise its environmental and social impact on resources, taking into consideration, for instance, consumption and improving efficiency in its energy use, air emissions, waste management, water use and reuse, and other resources and material inputs, and to recover, reuse or repurpose waste materials in implementing the project. Where benchmarking data are available, the client's assessment will compare its operations with GIP to establish the relative level of efficiency and re-use, or the limitations of material use. Such measures may include, but are not limited to, reducing inefficiencies in the use of materials, promoting waste prevention, reuse and recycling in accordance with the waste hierarchy or avoiding activities that would lead to a significant increase in the disposal of waste.

### Water

9. All technically and financially feasible and cost-effective opportunities for water minimisation and recovery in accordance with GIP will be identified and considered as part of the project design. Where a project-specific water supply needs to be developed, the client will seek, where feasible, to utilise water for technical purposes that is not fit for human consumption.
10. For projects with high water demand (exceeding 5,000 m<sup>3</sup>/day), the following will apply:
  - A detailed water balance will be developed during the assessment process and be maintained and reported annually to the EBRD.
  - Specific water use (measured by volume of water used per unit production) will be assessed.

<sup>39</sup> Technical feasibility is based on whether the proposed measures and actions can be implemented with commercially available skills, equipment, and materials, taking into consideration prevailing local factors such as climate, geography, infrastructure, security, governance, capacity and operational reliability. Financial feasibility is based on commercial considerations, including relative magnitude of the incremental cost of adopting such measures and actions compared with the project's investment, operating and maintenance costs.

<sup>40</sup> Cost-effectiveness is determined based on the capital and operational costs and financial benefits of the measure considered over the life of the project.

- Operations will be benchmarked to available industry standards and GIP on water use efficiency.
- Opportunities for continuous improvement in terms of water use efficiency and recovery should be identified.

11. The client will, as part of its environmental and social assessment process, consider the potential cumulative impacts of water abstraction on third-party users and local ecosystems. This assessment will also consider the potential effects of climate change. Where adverse risks and impacts are identified, the client will implement appropriate measures to mitigate such risks and impacts in accordance with the mitigation hierarchy approach and GIP.

## Waste<sup>41</sup>

12. The client will avoid or minimise the generation of waste materials and reduce their impacts as far as practicable. Where waste generation cannot be avoided but has been minimised, the client will reuse, recycle or recover waste, or use it as a source of energy in a manner that is safe for human health and the environment. Where waste cannot be recycled, reused or recovered, the client will need to treat and/or dispose of it in an environmentally sound and safe manner that includes the appropriate control of emissions and residues resulting from handling and processing the waste material and, where relevant, is in accordance with European Union (EU) substantive environmental standards or equivalent GIP standards.
13. If the waste generated is considered hazardous by national and/or EU regulations, the client will consider the limitations applicable to transboundary movements of waste and other applicable legal requirements.
14. When waste disposal is transferred offsite and/or managed by third parties, the client will obtain chain-of-custody documentation to the final destination and use contractors that are licensed by the relevant regulatory agencies. The client will maintain appropriate duty of care with respect to waste management.

## Pollution prevention and control

15. The client's environmental and social assessment process will determine the appropriate pollution prevention and control methods, technologies and practices or techniques to be applied to the project. The assessment will take into consideration the characteristics of the facilities and operations that are part of the project, the project's geographical location and local ambient environmental conditions. The client will provide the Bank with emission and discharge data proportionate to the nature and scale of the project's risks and impacts.<sup>42</sup>
16. In cases where the Bank's investment is not directed at a specific project or physical assets, clients may be required to provide information on emission and discharge data to allow an assessment of overall operations and benchmarking against national legislation, BAT and GIP, as applicable.
17. The assessment process will identify technically and financially feasible and cost-effective pollution prevention and control techniques that are best suited to avoiding or minimising adverse impacts on human health and the environment. The techniques applied to the project will favour the prevention or avoidance of risks and impacts over minimisation and reduction, in accordance with the mitigation hierarchy and consistent with GIP, and be appropriate to the nature and scale of the project's adverse risks and impacts and to the potential impacts on vulnerable people.
18. The client will structure the project to meet relevant EU substantive environmental standards, where these can be applied at project level.<sup>43</sup> Projects that, due to their nature and scale, would be subject to the EU

41 For the purposes of this ESR, waste is defined as a heterogeneous mixture of gaseous, liquid and/or solid substances and materials that needs to be treated using adequate physical, chemical and/or biological processes before it can be safely disposed of into the environment.

42 The client will provide this information, where possible, in tonnes or kilogrammes, with emission and discharge levels expressed in mg/Nm<sup>3</sup> and mg/l, as appropriate, and specify the methodology used to identify the pollutants and determine their volume, emission and discharge levels, where possible.

43 For the purposes of this ESR, EU substantive environmental standards can be applied at the project level, where the EU secondary legislative document itself contains clear quantitative or qualitative requirements that apply at the project level (as opposed to, for example, the ambient level).



Industrial Emissions Directive<sup>44</sup> will, regardless of location, be required to meet EU BAT and associated emissions levels, as set out in the EU BAT Conclusions.

19. Where no EU substantive environmental standards at project level exist, the client will identify, in agreement with the EBRD, other appropriate environmental standards in accordance with GIP. In addition, projects will be designed to comply with applicable national law and be maintained and operated in accordance with national law and other applicable regulatory requirements. When host-country regulations differ from the levels and measures presented in EU substantive environmental standards or other relevant environmental standards, projects will be required to meet whichever is more stringent.
20. Projects are required to meet EU substantive environmental standards or other agreed environmental standards, as well as national regulatory requirements, from the outset. Where projects involve existing facilities and/or operations, these are required to meet the requirements of paragraph 16 and/or 17 over a reasonable period of time, to be determined by a formal assessment of their performance against the applicable standards.
21. In respect of projects located in EU member states and EU acceding, candidate and potential candidate countries that involve the rehabilitation of existing facilities and/or operations, and where relevant EU substantive environmental standards have been identified, the timeframe to achieve compliance with these standards will take into account any nationally agreed timeframes. For projects in all other countries, the timeframe for achieving compliance with EU substantive environmental standards will take into account local conditions and the cost of application, and will be consistent with the European Neighbourhood Policy and any bilateral agreements or action plans agreed between the EU and the relevant host country.
22. Throughout the project lifecycle, the client will apply pollution prevention and control techniques consistent with the mitigation hierarchy to minimise potential adverse impacts on human health and the environment while remaining technically and financially feasible and cost effective. This applies to the release of pollutants due to routine, non-routine or accidental circumstances.
23. The client will provide the Bank with project information related to pollution risks, liabilities, provisions or costs associated with meeting the requirements of national legislation and applicable EU substantive environmental standards, proportionate to the nature and scale of the project's risks and impacts.

## Greenhouse gas emissions

24. The client's environmental and social assessment process will consider alternatives and implement technically and financially feasible and cost-effective options to avoid and, if avoidance is not possible, to minimise, mitigate and, as a last resort, remedy any potential residual adverse impacts arising from project-related GHG emissions during the design and operation of the project.
25. For projects that either have, or are expected to have, gross emissions in excess of 20,000 tonnes of CO<sub>2</sub> equivalent annually, or are expected to result in a net change in emissions, positive or negative, of more than 20,000 tonnes of CO<sub>2</sub>-equivalent annually post-investment, the client will quantify these emissions in accordance with the EBRD Protocol for Assessment of Greenhouse Gas Emissions. The client will report emissions data to the EBRD on a yearly basis.

## Safe use and management of hazardous substances and materials

26. In all activities directly related to the project, the client will avoid or minimise the use of hazardous substances and materials, and consider the use of less hazardous substitutes for such substances and materials so as to protect human health and the environment from their potential impacts. Where avoidance or substitution is not feasible, the client will apply appropriate risk management measures to minimise or control the release of such substances/materials into the air, water and/or land as a result of project-related production, transportation, handling, storage, use and disposal. To prevent and minimise environmental impacts and contamination with microorganisms and chemicals with antimicrobial properties, the client will undertake GIP wastewater treatment and livestock faecal waste treatment.

<sup>44</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), as amended by the European Commission (2024).

27. The client will avoid the manufacture, trade and use of hazardous substances and materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation or potential for depletion of the ozone layer.
28. The client will make sure that the phase-out of hazardous substances is in line with GIP and applicable international agreements.

## **Pest management**

29. Clients who manage or use pesticides, including chemicals with antimicrobial properties, will formulate and implement an integrated pest management (IPM) and/or integrated vector management (IVM) approach for pest management activities, including their phase-out in line with GIP. The client's IPM and IVM programmes will coordinate the use of pest and environmental information together with available pest control methods, including cultural practices, biological, genetic and chemical means to prevent unacceptable levels of pest damage. When pest management activities include the use of pesticides, the client will strive to reduce the impacts of those pesticides on biodiversity, human health and the broader environment and, more generally, to achieve the more sustainable use of pesticides, as well as a significant overall reduction in the risks and uses of pesticides, consistent with the necessary crop protection.
30. The sustainable use of pesticides will include:
  - avoiding or, if not possible, minimising the impacts of pesticides on biodiversity, human health and the broader environment
  - reducing the levels of harmful active substances by replacing the most dangerous ones with safer (including non-chemical) alternatives
  - selecting pesticides that are low in toxicity, known to be effective against the target species, and have minimal effects on non-target species, such as pollinating insects and the environment
  - the promotion of low-input or pesticide free crop farming that relies on IPM and IVM strategies
  - minimising damage to natural enemies of target pests and preventing the development of resistance in pests
  - ensuring users of pesticides are adequately trained in safe usage
  - ensuring phase-outs are in line with GIP and international agreements.
31. The client will handle, store, apply and dispose of pesticides in accordance with GIP.

## **Noise and vibration**

32. Clients will assess the noise and vibration impacts of the project, based on the results of the environmental and social risk assessment. This may require baseline data, the identification of key receptors and the assessment of impacts of the development, taking into account both negative and positive impacts and compliance with national legislation and GIP.