

Appendix 5

Environmental and Social Monitoring Checklist

to the Environmental and Social Management Framework (ESMF) – Climate Resilience in Water Resources Management Project

INTRODUCTION

This document serves as a framework template, not a monitoring plan for a specific construction site. The values in Part 2 are minimum benchmarks, to be refined for each activity during the ESIA/C-ESMP phase. The most stringent requirement among this checklist, the ESIA results/inventory, and national law shall apply.

This checklist supplements the ESMP template (Appendix 3) and shall be applied together with it. This list applies to Tasks classified as Low, Moderate, or Substantial risk, consistent with the scope of Appendix 3. Tasks classified as High risk — including those involving critical habitats or involuntary resettlement — require a dedicated ESIA with a separate, standalone ESMP and monitoring plan (BMP/CHMP/EPP/LARAP), approved by the Bank prior to the commencement of works.

The document consists of two parts: Part 1 – institutional/administrative matters; Part 2 – monitoring plan (preparation, construction, operation, horizontal requirements). The rows in Part 2 apply to a Task irrespective of its risk classification (Low/Moderate/Substantial), at a level of detail proportionate to the classification, consistent with Appendix 7. The identification and classification of risks for individual tasks are contained in the Screening Form (Appendix 2).

Application of the checklist in the subtask cycle

1. Screening — the result determines whether this checklist should be used or whether a dedicated ESIA is required, as well as which entries in Part 2 are relevant to the task.
2. Preparation (ESIA/C-ESMP, nature inventories, habitat assessment, determination of minimum flow) — the parameters in Part 2 are refined and, if necessary, made more stringent.
3. Bidding and Contracting — the completed, task-specific version of Parts 1–2 serves as an appendix to the construction contract and the supervision agreement.
4. Implementation and supervision — compliance is verified by the Contract Engineer (construction) and the Operator (operation), under the oversight of the PIU and PCU; results are reported in accordance with the “Reporting” section.

PART 1: INSTITUTIONAL/ADMINISTRATIVE MATTERS

This template is to be completed separately for each Task; the indicated roles are to be filled in with names after the selection procedures are completed.

Role	Description
Project	Climate Resilience in Water Resources Management Project (BCRWMP)
PIU	State Water Holding “Polish Waters” — Project Implementation Unit (PIU), responsible for preparation, coordination, monitoring, and reporting to PCU and, through it, to the World Bank in accordance with the ESCP
Contract Engineer	Entity(ies) selected through a competitive bidding process for individual tasks, responsible for ongoing verification of the works’ compliance with the project, the environmental decision, and the C-ESMP
Contractor	Construction Contractor(s) for construction works on individual Tasks, responsible for developing and implementing the C-ESMP and for ongoing monitoring during the construction phase (names to be provided after contracts are signed)
Environmental Supervision	Independent environmental experts (ornithologist, chiropterologist, ichthyologist, botanist—depending on the Task), responsible for inventory, field supervision, and verification of BMP implementation
Archaeological supervision	A licensed archaeologist, engaged in the event of earthworks in areas with archaeological potential and in response to chance finds
Operator/manager of the structure	The entity responsible for operating the completed infrastructure (embankments, reservoirs, polders, dams) and for monitoring during the operational phase, including the implementation of the Operating Guidelines and the Emergency Preparedness Plan (EPP)
Independent E&S Auditor	An external entity or expert, independent of the PIU and the Contractor, selected by the PIU in consultation with PCU and the Bank, to conduct periodic environmental and social compliance audits (see Part 2, triggering criteria in Part 2.D)
World Bank	Review of monitoring reports and audits, issuance of recommendations, verification of compliance with the ESCP and ESS; issuance of a “no-objection” letter prior to the commencement of work for tasks requiring a dedicated ESIA
PCU	Project Coordination Unit — reviews and clears E&S monitoring reports and audit findings from the PIU prior to their submission to the World Bank, in accordance with Table 24; an intermediary between the PIU and the World Bank within the adaptive management process; receives issues escalated by the PIU, consolidates monitoring data from all Tasks, and verifies E&S consistency at the Project level
Grievance Redress Mechanism (GRM)	Operates in accordance with a separate document (Appendix – GRM). GRM register entries constitute one of the sources of monitoring data in Part 2 of this list
Institutional Capacity for Monitoring	The PIU ensures access to external experts (in natural sciences, archaeology, and hydrology) appropriate with the number and risks of concurrent tasks; training and staffing needs are reviewed at least once a year and reported to the Bank as part of the ESCP

PART 2: MONITORING PLAN

A. Preparation and Planning Phase

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Land occupied by structures (area in hectares, compliance with the construction design)	Design documentation, administrative decisions	Verification of design documentation and comparison with the area planned for use.	One-time prior to the start of construction; updated in the event of design changes	Confirmation of full completion of LARAP and readiness to hand over the site to the Contractor before entering the construction site (verification of actual land use occurs in Part B)	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Environmental and Social Baseline	Subproject impact area (water, groundwater, soil, biocoenoses, noise/air, PAP)	One-time baseline surveys/measurements (water and groundwater quality, riverbed condition, nature inventory/survey, noise levels, socioeconomic data on affected persons) serving as a reference point for monitoring during the construction and operation phases	One-time, prior to commencement of construction works or any impact-generating field activities; non-invasive surveys required to establish the baseline may be carried out beforehand.	To provide the baseline necessary for a reliable assessment of changes caused by the subtask in subsequent monitoring phases	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Habitat assessment / status of Natura 2000 sites and priority habitats	Subproject's area of influence	Review of the ESIA/habitat assessment, GDOŚ/RDOŚ derogation decisions; nature inventory/survey	Before the start of construction; update if the survey is older than one growing/breeding season	Confirmation that the works do not compromise the integrity of a protected area or a critical habitat without the required permits	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Designation of the minimum flow	The river section downstream and upstream of the impoundment structure/reservoir	Calculation using the methodology in accordance with the Water Law; inclusion of the result in the Operating Rules	One-time during the design phase; review upon updating the Operating Rules	Ensuring the ecological continuity of the watercourse downstream of the impoundment structure	To be completed during the ESMP phase.	To be completed during the ESMP phase.

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Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Safety classification of the dam/water-retaining structure and appointment of an Independent Panel of Experts / IDSPoE (if required)	Design documentation/ESIA	Classification based on criteria of head, storage capacity, and hazard potential; appointment of an Independent Panel of Experts / IDSPoE for structures with high hazard potential, or exhibiting substantial or high risk due to downstream impact potential or technical complexity, consistent with Table 13 (Section 6.3 of ESMF)	One-time prior to approval of the construction design	Establishment of an appropriate safety supervision regime (EPP, periodic inspections) proportional to the risk	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Preliminary (desk-based) review of archaeological potential and cultural heritage values, including known cemeteries, shrines, and places of worship	Conservation registers and archives for the area of influence	Review of data from the Provincial Conservator of Monuments, the register of historic monuments, available archaeological studies, and the locations of known cemeteries/shrines; assessment of the need to prepare a CHMP and avoidance/management measures for known sites prior to the start of earthworks	One-time during the subproject preparation phase, prior to notification of earthworks	Mitigation of the risk of unforeseen work stoppages and damage to unidentified cultural heritage - a preventive measure complementing the reactive Chance Finds Procedure during the construction phase	To be supplemented during the ESMP phase.	To be completed during the ESMP phase.
Identification and assessment of environmental and social risks associated with associated facilities	Access roads, utility connections, and storage/disposal sites not directly funded by the Project but necessary for the implementation of the task	Review whether the task requires associated facilities not funded by the Project, consistent with Part C8 of the Preliminary Verification and Classification Form (Appendix 2); if so, assess their environmental and social risks according to the same principles as for the task itself and incorporate the results into the ESMP/C-ESMP	Once, during the subproject preparation phase	Verify whether the environmental and social impacts of facilities necessary for the Task but funded from other sources have been taken into account in the assessment in accordance with ESS1.	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Conduct and document public	Municipality/local community within	Review of consultation minutes, attendance lists, comments submitted, and	Once, prior to the start of construction; again in the event of a significant change	Confirmation of compliance with ESS10 requirements	To be completed	To be completed during the ESMP phase.

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Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
consultations for the subproject (SEP)	the area of influence, including PAP	how they were addressed, in accordance with the Stakeholder Engagement Plan	to the scope of the subproject	and identification of community concerns prior to the start of work	during the ESMP phase.	
Functionality of the GRM for the subproject	GRM contact point at the task/municipality level	Verification of the availability of grievance/complaint reporting channels (including for people with limited internet access), the publication of information about the GRM, and readiness to receive and record grievances/complaints in the GRM register	One-time prior to the start of work—a prerequisite for entering the construction site	Ensuring that individuals potentially affected by the subproject have access to a grievance/complaint submission channel before any impacts begin	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Ensure that the environmental and social risk classification established in the screening form is up to date	Preliminary Verification and Classification Form (Appendix 2) and ESIA/C-ESMP Documentation	Re-evaluation of the risk classification immediately prior to the start of construction, considering design changes, the results of the baseline survey, and the time elapsed since the screening	Once, no earlier than 3 months before the planned start of work	To prevent a situation where work begins based on an outdated risk classification (e.g., due to changes in the natural environment or the scope of work)	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Readiness to commence work (permits, Construction Contractor's approved C-ESMP)	Administrative and contractual documentation for the task	Completeness check: all required administrative permits obtained; Contractor's C-ESMP developed and approved by the Contract Engineer; the issues addressed above (LARAP, baseline, SEP, GRM, cultural heritage) closed	One-time, immediately before the Contractor enters the construction site	Confirmation that all ESMF prerequisites have been met prior to the start of work	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Implementation of LARAP; compensation payment	Site accessible to the Contractor	Review of payment documentation and site handover protocols; GRM register of grievances/complaints regarding land acquisition. If the project screening (Preliminary Verification and	Monthly until the completion of the resettlement/compensation process	Ensure that access to the construction site occurs only after the agreed-upon LARAP procedures have been completed	To be completed during the LARAP phase.	To be completed during the LARAP phase.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
		Classification Form, Appendix 2) identified prior project-related land acquisitions made before the start of LARAP procedures—a separate Resettlement Audit applies in lieu of or in addition to this monitoring				
Land Acquisition	Site available to the Contractor	Property takeover protocols	Monthly until the real estate acquisition process is completed	Confirmation that the real estate acquisition process complies with LARAP and national real estate regulations prior to handing over the site to the Contractor	To be completed during the LARAP phase.	To be completed during the LARAP phase.

B. Construction Phase

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Status of erosion and reclamation of areas disturbed by earthworks	Construction sites, slopes, temporary areas	Site inspections using an erosion control checklist; inspection of the rehabilitated area	Monthly during earthworks; final inspection after site restoration	Limiting soil erosion and verifying the restoration of vegetation cover	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Surface water quality (total suspended solids, turbidity, pH, dissolved oxygen)	Measurement points upstream and downstream of the work site in the river channel	Field/laboratory measurements according to standardized methods, relative to pre-construction baseline values	At least once a week during work in the riverbed or its immediate vicinity; immediately following incidents (e.g., breach of a cofferdam)	Detection of exceedances and rapid response to prevent watercourse contamination	To be completed during the ESMP phase.	To be completed during the ESMP phase.

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Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Condition of the river channel, banks, and sediment transport	Section subject to hydrotechnical works	Geodetic/hydromorphological measurements before the start and after the completion of works on a given section	Before the start and after the completion of work on each section	Confirmation of compliance with the design specifications and the absence of excessive degradation of the river channel	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Implementation of the Flood Risk Management Plan for work in the river channel	Construction site in the floodplain	Review of plan documentation, hydrological and meteorological monitoring records, and emergency procedures; exercise reports	Continuous hydrological and meteorological monitoring during the construction season; review of the plan prior to the high-water season	Mitigation of the risk of work interruption/damage and hazards to workers resulting from flooding during construction	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Safety of the dam during construction (compliance with the construction design, EPP)	Construction site of the dam	Inspections to verify compliance of the work with the design and safety classification; EPP review; opinions of the Independent Panel of Experts / IDSPoE (if appointed)	Periodic inspections according to the work schedule (at least quarterly) and at key stages (e.g., prior to filling)	Ensuring that the dam is constructed in accordance with dam safety requirements	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Groundwater level (construction site dewatering)	Piezometers in the drainage impact area	Piezometer readings relative to the pre-construction baseline	At least once a week during dewatering; more frequently for water intakes within the area of impact	Early detection of excessive groundwater level drawdown threatening water intakes or vegetation	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Status of aquatic biocoenoses (macrophytes, benthic invertebrates, fish) and implementation of BMPs	River section/reservoir affected by the works	Surveys of biocoenoses before and after the start of work; records of fish capture/relocation, if applicable	Before work begins, during work (if required by the BMP schedule), and after work is completed	Assessment of the effectiveness of mitigation measures and compliance with the BMP biological schedule	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Presence and activity of sensitive wildlife (birds, bats) during breeding seasons	Work area and its immediate vicinity	Field visits for environmental monitoring; verification of compliance of the work schedule with species protection periods	Regularly during the breeding season (at least every 2 weeks), before work begins at a new location	Prevention of disturbance or destruction of nesting sites/breeding colonies	To be completed during the ESMP phase.	To be completed during the ESMP phase.

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Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Spread of Invasive Alien Species (IAS)	Construction sites, access roads, restoration areas	Monitoring of equipment cleaning; field inspections for the presence of IAS	Whenever new equipment enters the construction site; monthly site inspections	Prevention of the introduction or spread of non-native species	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Noise levels near sensitive receptors	Nearest residential areas/sensitive locations	Sound level meter measurements; GRM register	At the start of work at a given location and each time a grievance/complaint is reported	Ensuring compliance with permissible noise levels	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Air quality / dust	Construction site and surrounding area, access roads	Visual inspection; PM10 measurements in case of grievances/complaints; technical inspections of equipment	Continuously, every day; technical inspections according to the manufacturer's schedule	Limit dust and exhaust emissions to levels that do not cause a nuisance	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Construction (mineral) waste management	Waste storage areas on the construction site	Monitoring of waste transfer documents, waste records, storage areas, and waste segregation	Monthly and with each waste transport	Ensuring compliance with waste regulations and preventing environmental pollution	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Storage of hazardous materials and prevention of spills (fuels, oils, lubricants)	Fuel/oil refueling and storage areas on the construction site	Verification of Material Safety Data Sheets (MSDS), tank integrity, and spill containment units; spill response procedures	Monthly and immediately after each incident (leak, spill)	Prevention of soil and water contamination resulting from petroleum product leaks	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Archaeological finds / cultural heritage (chance finds)	Entire area of earthworks	Chance Finds Procedure: suspend work, report to the monument conservator, assessment by archaeological supervision	Immediately upon discovery; archaeological supervision present as planned in areas with increased potential	Protection of undiscovered cultural heritage in accordance with ESS8	To be completed during the ESMP phase.	To be completed during the ESMP phase.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Condition of historic structures in the vicinity of the works	Structures under conservation within the area of influence	Documentation of the condition before and after the start of work (CHMP); verification of preservation permits	Before the start and after the completion of work in the vicinity of the structure	Prevention and detection of potential damage to historic structures	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Road and pedestrian safety around the construction site, including access for emergency services	Access roads, residential areas, schools, crosswalks, and detours within the scope of construction traffic	Inspection of signage, detours, temporary pedestrian crossings, and compliance with the Traffic Management Plan (C-ESMP component); verification of access for emergency services	Monthly and whenever traffic organization changes	Reducing the risk of accidents among residents, including vulnerable groups (children, the elderly), and ensuring unimpeded access for emergency services	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Disruptions to utility services (water, electricity, sewer, telecommunications) resulting from construction work	Networks and connections within the scope of the construction work	Arrangements with utility operators prior to the start of work posing a risk of service interruptions; communication of planned outages to residents by SEP	Before any planned intervention in the network; immediately in the event of a failure	Minimizing inconvenience to residents and institutions (including sensitive facilities, if any) caused by interruptions in utility service	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Sources of construction materials (quarries, excavation pits / quarry sites)	Sources of materials indicated by the Contractor, if other than licensed storage facilities	Verification that the supplier holds the required environmental permits; for new excavation pits / quarries—an environmental assessment analogous to the rules applied to the task	Once, prior to signing the supply contract; updated upon a change of supplier	Prevention of the spread of uncontrolled environmental impacts beyond the formal project area	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Risk of damage to buildings, wells, and infrastructure due to vibrations/shocks (e.g., during pile driving)	Buildings, wells, and infrastructure within the impact range of works causing vibrations	Technical condition inspection (photographic inventory) prior to the start of work at a given location; vibration measurements during work near sensitive structures; follow-up inspection upon completion	A one-time inspection before work begins at a given location; continuous vibration monitoring during vibration-generating work; final inspection upon completion	Establishment of a baseline condition to facilitate the resolution of potential claims and the early detection of excessive vibrations	To be completed during the ESMP phase.	To be completed during the ESMP phase.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Presence and qualifications of the Contractor's E&S/OHS personnel on the construction site	Construction site	Verification that the Contractor has designated and maintains a person on-site responsible for implementing the C-ESMP and OHS, in accordance with the Labor Management Procedures (LMP)	At the start of work and whenever there is a change in the responsible personnel	Ensure that the C-ESMP is actually implemented on-site, not just on paper	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Record of Nonconformities and Corrective Actions (task)	Construction site - all parameters monitored in Part B	Record every instance of exceeding threshold values or non-compliance with the C-ESMP, including the date and status of the corrective action	On an ongoing basis, with a monthly summary review	Ensure systematic adaptive management at the task level and filing the consolidated project register (Part D)	To be completed during the ESMP phase.	To be completed during the ESMP phase.

C. Operations Phase

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Compliance with the Operating Rules for the reservoir/structure and adherence to the minimum flow requirement	Retaining structure / reservoir / polder and the section downstream	Flow measurements downstream of the structure relative to the designated minimum flow rate; review of compliance with the Operating Rules	Continuous automatic monitoring or readings at least once a day; quarterly summary report	Ensuring the ecological continuity of the watercourse and minimizing the negative impact of flow regulation on biocoenoses downstream of the structure	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Initial filling of the reservoir (impoundment) - applies to new dams forming a permanent reservoir	Reservoir and the section downstream of the impoundment structure	Implementation of a dedicated First Reservoir Filling / Impoundment Plan (required for "High" risk - the First Filling/Impoundment Plan shall be included in the standalone ESMP/monitoring plan; this checklist provides only a reference benchmark.); intensive monitoring of the structure's technical	Continuously during the filling period; summary upon reaching the target impoundment level	Detection of structural or environmental anomalies during the most critical period of the dam's operation	To be completed during the ESMP phase.	To be completed during the ESMP phase.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
		parameters and water quality during filling				
Channel morphology and sediment deposition during filling/emptying	River section within the reservoir's/polder's area of influence	Periodic geodetic/bathymetric measurements of the river channel and cross-sections	At least once a year and after each significant filling/emptying episode	Identification of adverse erosion/deposition trends resulting from operation	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Reservoir water quality (eutrophication, thermal stratification) and GHG emissions (CH ₄ , CO ₂)	The reservoir and its immediate catchment area	Water sampling (physicochemical parameters, chlorophyll a) and, where applicable, measurement/estimation of GHG emissions	Seasonally (at least twice a year—during the summer stagnation period and the circulation period), in accordance with the guidelines set forth in the Operating Rules	Early detection of eutrophication, mitigation of risks to water quality, and reporting of the carbon footprint of operations	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Sustained changes in groundwater levels in areas upstream of the reservoir	Piezometers in agricultural and built-up areas upstream of the reservoir	Piezometer readings relative to baseline conditions; monitoring of soil and building moisture levels	Quarterly during the first 2 years of operation, then every six months	Early detection of flooding of agricultural land or moisture accumulation in buildings due to rising groundwater levels	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Safety of the dam in operation, including the readiness of the warning system for communities downstream of the dam (periodic inspections, EPP)	Impounding structure and the hazard zone downstream of it	Periodic safety inspections (visual and instrumental), review and update of the EPP, emergency drills; verification of the warning system's functionality (sirens/announcements) and the timeliness of risk information provided to the public	Inspections based on the structure's safety class (typically annually; more frequently for high-risk structures); EPP drills at least once every 2 years, including a test of the warning system	Prevention of dam failures, ensuring emergency preparedness, and raising hazard awareness among residents living downstream of the dam	To be completed during the ESMP phase.	To be completed during the ESMP phase.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Regulatory and retention functions of the valley/river ecosystem and implementation of BMPs during the operational phase	The river valley within the subproject's area of influence	Monitoring of ecosystem function indicators (e.g., groundwater levels, habitat connectivity, fish passage effectiveness)	Annually for the first 3–5 years of operation, then in accordance with the BMP monitoring plan	Verification of the effectiveness of compensatory measures and compliance with the no-net-loss/net-gain principle (ESS6)	To be completed during the ESMP phase.	To be completed during the ESMP phase.
Benefits of flood protection / flood risk management and retention (positive indicators)	Catchment area protected by the subproject	Monitoring of hydrological effectiveness (level of protection, retention volume) and ecosystem services indicators	Annually, as part of routine environmental and social reporting	Documentation of the project's anticipated benefits for the Bank and stakeholders	To be completed during the ESMP phase.	To be completed during the ESMP phase.

D. Horizontal Requirements

For dam construction projects requiring an Independent Panel of Experts (EPP/IDSPoE), as well as for all Substantial and High risk assignments, an independent audit is mandatory. For High-risk assignments, the detailed audit requirements are specified separately in the ESMP or monitoring plan, and not only in this checklist.

This audit is a periodic, independent review — it does not replace day-to-day construction supervision, which continues throughout the entire implementation of the works and is carried out by the supervision inspector under the C-ESMP. In other words, construction is supervised on an ongoing basis, while the audit constitutes an additional, independent verification carried out at key stages.

For Moderate-risk projects, the audit is recommended but not mandatory; the PIU and the Bank agree on its scope and frequency in the ESCP.

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
Independent environmental and social audit	Tasks meeting the above trigger criteria (impounding structures with the EPP/Independent Panel of Experts /	An audit conducted by an entity independent of the PIU, Contractor, and Contract Engineer, including a review of documentation, a site visit, interviews with stakeholders	At least once a year during construction for facilities meeting the trigger criteria; at least once every	Ensuring an independent layer of accountability that is not replaced by the internal supervision chain of Contractor – Contract Engineer – PIU; a	See the Project's estimated costs	Assignment: PIU, in consultation with PCU and the Bank; execution: independent E&S auditor

Monitored parameter/indicator	Monitoring location	Measurement method	Minimum Monitoring Frequency	Purpose/Rationale for Monitoring	Estimated cost	Responsibility (implementation/supervision)
	IDSPoE; Substantial/High-risk subprojects)	(including affected persons), and an assessment of compliance with the ESMP/C-ESMP, ESCP, environmental decisions, and the EPP	2 years during the operational phase for the first 5 years, and thereafter at a frequency agreed upon with the Bank	requirement raised by the World Bank in the ESMF review		
Consolidated register of non-conformities and corrective actions (project level)	PIU — consolidation of data from all tasks	Summary of non-conformities identified by the Contract Engineer and Contractors on individual tasks (water quality, noise, waste, OHS, etc.) along with the status of corrective actions	Quarterly, as the basis for reporting to the Bank through PCU, in accordance with Table 24	Enables the PIU and the Bank to track recurring issues across the entire project that extend beyond individual tasks	See in the Project's estimated costs	PIU; oversight: PCU; source data: Contract Engineer for individual tasks
Register of Grievances and Requests (GRM) as a source of monitoring data, including the SEA/SH reporting trail	GRM contact points across all subprojects, consolidated by the PIU	Review of the GRM register: number and nature of grievances received, response times against SEP-defined deadlines, resolution status, and the functioning of the confidential SEA/SH reporting pathway	Monthly during construction; quarterly during operation	Early detection of issues reported by the community, supplementing technical monitoring data; ensuring a secure channel for SEA/SH reporting	See the Project's estimated costs	PIU; GRM contact point

REPORTING

Reporting will be carried out in accordance with the requirements set forth in the ESMF, **Section 11 (Monitoring, Oversight, and Reporting)**, including submission through PCU in accordance with Table 22.

Legend / Abbreviations

Term	Definition
Associated Facilities	Facilities not funded as part of the Project but whose viability and existence depend exclusively on the Task, and without which the Task would not be viable
BMP	Biodiversity Management Plan (BMP)
C-ESMP	Contractor Environmental and Social Management Plan (ESMP)

Term	Definition
Chance Finds Procedure	Procedure for managing previously unidentified archaeological or cultural heritage discoveries during earthworks
CHMP	Cultural Heritage Management Plan
Contract Engineer	Entity engaged under the FIDIC contract conditions responsible for day-to-day supervision of the Contractor's works, including E&S compliance
EPP	Emergency Preparedness Plan for Dam Safety
ESCP	Environmental and Social Commitment Plan (ESCP)
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	World Bank Environmental and Social Standards (Environmental and Social Standard)
GRM	Grievance Redress Mechanism
IAS	Invasive Alien Species (IAS)
IDSPoE	Independent Dam Safety Panel of Experts
LARAP	Land Acquisition and Resettlement Action Plan
LARF	Land Acquisition and Resettlement Framework
LMP	Labor Management Procedure
Minimum Environmental Flow	Minimum Environmental Flow — the minimum flow necessary to maintain the ecological continuity of a watercourse downstream of a dam
NBS	Nature-Based Solutions
PCU	Project Coordination Unit
PIU	Project Implementation Unit (the Wody Polskie unit responsible for implementing the Project)
RDOŚ / GDOŚ	Regional / General Directorate for Environmental Protection
SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SEP	Stakeholder Engagement Plan