Project Insight Note #17
Enhancing Internal Learning

International Water
Management Institute

Beyond compliance: strengthening environmental, social, governance and technical assurance in fragile contexts for accountable delivery and sustainable impact

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Al Murunah Project

Building climate resilience through enhanced water security in MENA

- Led by the International Water Management Institute (IWMI) in partnership with the International Union for Conservation of Nature (IUCN)
- Implemented in Palestine by the Palestinian Hydrology Group (PHG)
- Supported financially and technically by UK International Development.
- In coordination with Ministries of Water, Environment, and Agriculture in project countries (Figure 1: Egypt, Jordan, Lebanon and Palestine)

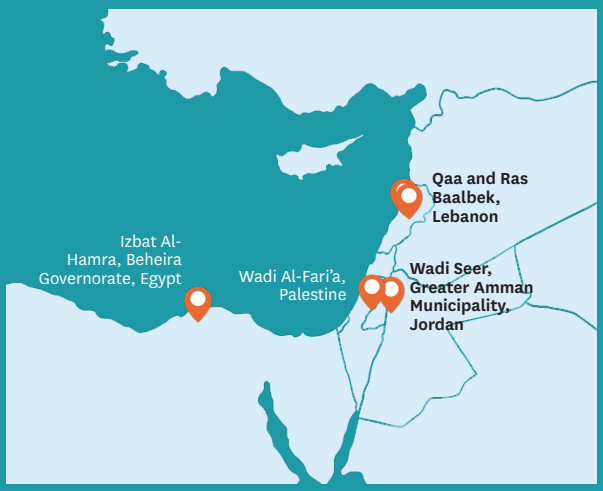


FIGURE 1. Map of Al Murunah implementation countries
Source: Authors (2025)

Background

Implementing physical works and infrastructure interventions in fragile and conflict-affected settings requires environmental, social, and governance (ESG) oversight that conventional frameworks are rarely equipped to meet. Security restrictions, limited mobility, changing implementation conditions and reduced access to project sites can constrain conventional supervision, and make it difficult to verify whether works and infrastructure are being delivered safely, in accordance with approved designs and with the intended long-term functionality. Also, beyond compliance and safeguarding, effective ESG management can support adaptive project governance, enabling teams to identify emerging risks early, course-correct during implementation, and maintain accountability even when operating conditions are constrained or unpredictable.

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Al Murunah is led by IWMI and implemented in Palestine in partnership with the Palestinian Hydrology Group (PHG). This Project Insight Note aims to share practical lessons from the experience of IWMI and PHG in applying ESG and technical assurance mechanisms in Palestine. It is intended primarily for project managers, development practitioners, and donor agencies involved in planning, implementing, and overseeing physical works in such contexts.

Of course, these ESG and technical assurance mechanisms sit within broader project design and implementation structures, and overall effective delivery relies on project owners and implementing agencies applying them in conjunction with 1.) participatory planning, co-design, and collaborative implementation processes that build on local experience and expertise and support long-term community ownership, and 2.) adaptive business continuity planning and robust operational risk management procedures. We elaborate on these crucial aspects elsewhere, including in Ruckstul and Rabi (2026) and the forthcoming pilot project report by PHG.

Delivering the Palestine resilient nature-based water solutions pilot required IWMI and PHG to develop and apply a multi-layered ESG assurance approach (Figure 2) in collaboration. This approach was designed to maintain accountability, transparency, effective technical and safeguard oversight while supporting adaptive risk management and informed decision-making throughout a project lifecycle defined by uncertainty, risk, and limited site access. It combined appropriate assurance mechanisms including implementation monitoring, documentation and independent engineering verification to help maintain oversight and manage emerging risks under constrained operating conditions.

Key messages

The experience demonstrated how ESG management can be integrated into project design, implementation, risk governance, and long-term sustainability planning rather than being treated primarily as a compliance exercise. This is critical for ensuring works achieve their intended objectives and outcomes, as well as helping to build trust between communities, authorities and implementing organizations. This trust underpins work across the humanitarian–development–climate–peace spectrum by enabling adaptive management and local involvement and ownership of interventions. In turn, these are critical enablers for responsible, credible, and impactful investment pipelines to scale climate resilience interventions in fragile and conflict-affected settings.

Establishing ESG oversight early in the project cycle

eSG risk management was incorporated during project development rather than being treated solely as a construction stage requirement. During partner selection and project design, IWMI conducted due diligence assessments of implementing partners, reviewing relevant policies, procedures, and existing risk management systems. Environmental, social, governance, and operational risks were identified and considered as part of the pilot co-development process with community and local stakeholders, alongside technical, financial, and community considerations at each stage.

This early and ongoing assessment helped identify issues that could influence project feasibility against a broad set of risk dimensions including land tenure and ownership complexity, community and governance dynamics, permitting requirements, implementation viability, and long-term operation, maintenance, and sustainability. By embedding ESG considerations into the co-design process, the project was better positioned to identify foreseeable risks early, mitigate against them in the technical design phase, and strengthen equitable benefit-sharing and ownership among local stakeholders from the outset. A key example is the shift, during the initial planning stage, from local stakeholders' most preferred pilot project option – which focused on wastewater treatment but would have been challenging to implement due to land requirements and costs – to the mutually agreeable alternative of spring, wadi, and irrigation canal rehabilitation with associated community space, agrobiodiversity garden, and support to form a Water User Association.

ESG risk register as a living management tool

The project treated risk management as a continuous discipline rather than a discrete exercise. The risk register was not completed and filed; it was maintained as an active instrument of project governance, and at the outset of conflict, PHG and IWMI collaborated with each other and the project funder to develop a robust business continuity plan.

Throughout implementation, risks were identified, documented, monitored, and periodically reviewed through established project management and reporting channels. As circumstances evolved, including significant deterioration

in the security environment and mounting restrictions on site access, the register was updated to reflect the changing operating context. Risks spanning site access, security, implementation delays, infrastructure quality, stakeholder relationships, sustainability, and operational continuity were kept under review, with mitigation measures adjusted as conditions required.

The experience reinforced a simple but important lesson: in complex operating environments, the effectiveness of ESG management depends on the quality of individual assessments as well as the strength of ongoing processes through which risks are identified, reviewed, mitigated, and systematically followed through to action by the project team with a range of project stakeholders. This demonstrates responsiveness and accountability, which are vital for relationship- and trust-building.

Technical and safeguards review during procurement and construction

Pilot implementation reinforced that technical quality, and ESG performance cannot be considered as separate assurance streams. The long-term environmental and social performance of work and infrastructure depends partly on whether physical work is technically strong, functional, safe and maintainable. To support this objective, IWMI specialists undertook systematic reviews of technical designs, bills of quantities, tender documentation, and contractor's proposal. These reviews extended beyond conventional quality assurance, serving to identify potential environmental and social risks, assessing compliance with applicable requirements, and verify that project interventions remained oriented toward their intended outcomes.

The deliberate involvement of specialists across disciplines including engineering, hydrology, irrigation, agronomy, and gender and social inclusion reflected an understanding that technical and ESG performance are closely connected. During construction, oversight was sustained through regular analysis of partner reports, contractor submissions, procurement records, site photography, video footage, and progress documentation. Concurrently, business continuity planning was activated to preserve project oversight and decision making despite deteriorating conditions on the ground.

Addressing assurance gaps through independent verification

One of the most significant challenges for IWMI in ESG accountability, management and technical assurance was the loss of access to the project site because of the deteriorating security environment. Rather than treating this constraint as an acceptable assurance gap, the team responded by strengthening the assurance architecture around it.

Project oversight was maintained through the systematic review of partner progress reports, technical designs, bills of quantities, beneficiary agreements, site photographs, video footage, and other implementation documentation. These reviews provided ongoing evidence of progress, compliance, and construction quality despite restrictions on routine site access. Furthermore, IWMI and PHG developed a 'virtual field trip' that helps viewers see works from various angles. With 360-degree panoramas, detailed imagery, GPS-tagged locations, and first-hand interviews, virtual field trips provide a unique output that supports risk management, supports local ownership of the interventions by providing stakeholders a venue to showcase their work in climate change adaptation to a global audience, and also for the project team to communicate and demonstrate project interventions.

Ultimately, IWMI commissioned an independent engineering review as a targeted risk mitigation measure within the broader governance framework. The independent review assessed accessible hydrological, civil and structural works, irrigation canal rehabilitation and landscaping/external works against the intended function, design intent and modified scope. It also included independent assessment of construction quality, environmental and safety considerations, system functionality, compliance with approved designs, and exposure to long-term sustainability risks.

The independent review found that all the implemented components were acceptable both physically and technically under observed conditions, with no evidence of structural failures. The review also identified a few localized issues requiring improvement and corrective actions at the time of inspection, including related to erosion protection, finishing, and environmental measures. The findings were subsequently communicated to PHG, which acknowledged the identified actions and incorporated them into the follow-up process to support completion, close-out, and handover to local authorities.

This provided an additional layer of assurance by testing not only whether processes had been followed but also whether

the implemented infrastructure was technically adequate, functional and fit for its intended purpose based on the evidence available, while helping to identify and follow up on outstanding actions before project close-out.

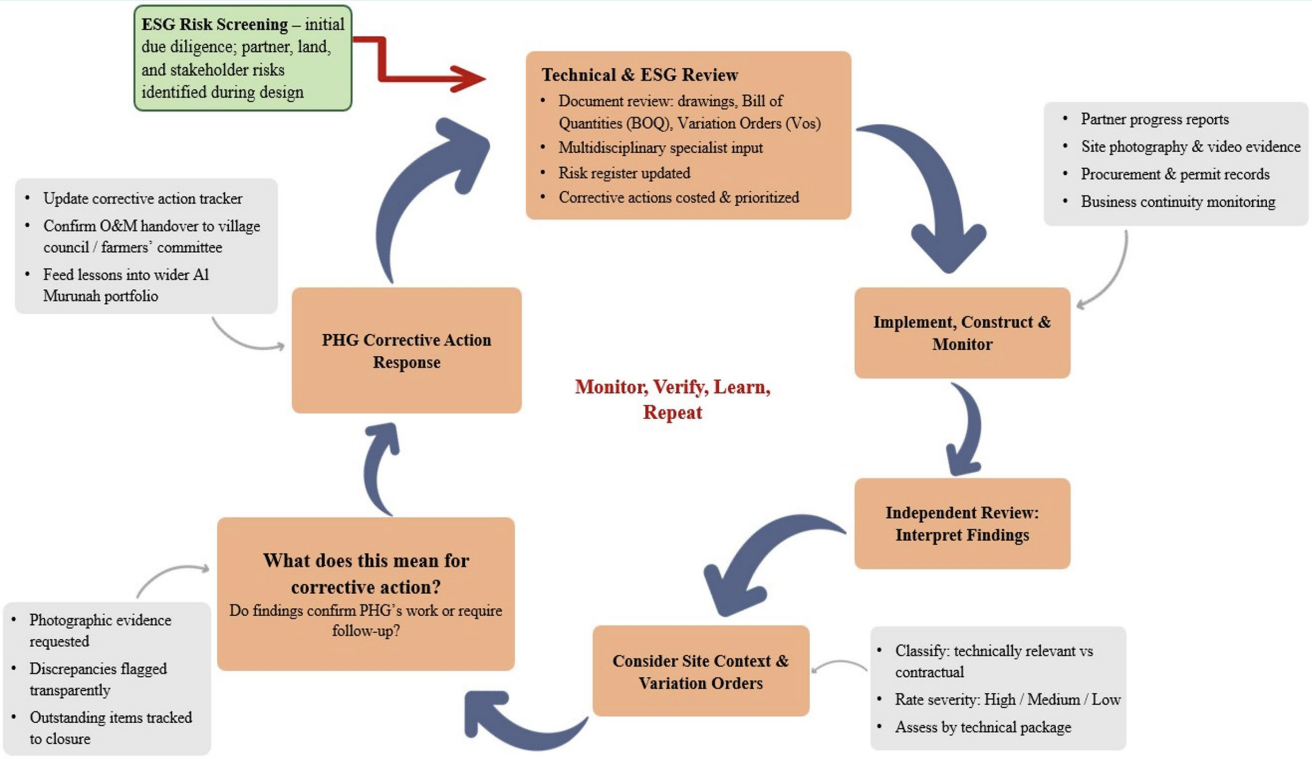


FIGURE 2. ESG and technical assurance workflow applied in the Palestine pilot.
Note: Abbreviations: ESG = Environmental, Social, and Governance PHG = Palestinian Hydrology Group.

Quantity and cost verification as a value-for-money safeguard

Beyond the assessment of technical quality, environmental and social risks, and construction performance, the project incorporated quantity and cost verification as a substantive governance measure and value-for-money safeguard. Across the design, procurement, and implementation phases, IWMI systematically reviewed bills of quantities, cost estimates, and contractor submissions, and supporting documentation to assess whether planned and completed works were consistent with approved designs and contractual requirements, and rationale for changes.

The independent engineering review extended this scrutiny by examining the alignment between installed works, reported quantities, and associated costs. This process provided meaningful assurance that project resources had been applied for their intended purpose and that implemented works reasonably reflected the scope and specifications set out in project documentation.

Where discrepancies, changes, or areas requiring clarification were identified, findings were documented and reviewed with PHG. This structured approach reinforced project accountability and transparency, while providing stakeholders with confidence that financial resources were being managed responsibly and that infrastructure investments were delivering the outcomes for which they were designed.

From risk identification to corrective action

The value of an ESG process lies in what changes, not what it documents. In the Palestine pilot, review findings were treated as the basis for action rather than the end of a compliance cycle.

Following completion of the engineering review, IWMI undertook a structured assessment of findings and established priority follow-up actions with PHG. These included addressing identified construction deficiencies, clarifying ownership and infrastructure handover arrangements, confirming operation and maintenance responsibilities, reviewing defect liability provisions in contractor agreements, planning future hydraulic performance assessments, and strengthening sustainability and long-term management arrangements with local authorities and the Water User Association.

This sequence demonstrated a critical principle: ESG oversight does not conclude when construction ends. Ensuring that works and infrastructure remain safe, functional, and effectively governed throughout their operational life is an important part of responsible project delivery.

Key lessons

The pilot provides several lessons on ESG and technical assurance associated with physical works and infrastructure programming in fragile and conflict-affected settings.

- ESG management must be embedded from the partner selection and project (co)design stage, not appended to construction. Early risk identification can influence the intervention technical design to avoid problems before significant resources have been committed.
- Strong relationships and collaboration between the project owner, implementing agency, contractor, government counterparts, and financing agency are critical. High trust, with verification, is imperative but takes time to earn.
- Risk registers must be treated as living governance instruments, not static records. Their value lies in enabling projects to adapt to shifting contexts and unforeseen challenges.
- Technical and ESG assurance need to work together. Engineering adequacy, environmental and social safeguards, safety, functionality and long-term sustainability should be considered together when assessing project design and performance.
- Independent quantity and cost verification complements technical and ESG reviews by ensuring that infrastructure projects not only meet required quality standards, but also demonstrate value for money, the responsible stewardship of project resources, and stakeholder buy-in for changes during adaptive implementation.
- Third-party verification strengthens ESG systems rather than substituting them. Its value is amplified when it operates within a coherent governance framework rather than standing apart from one.
- In fragile settings, no single assurance mechanism is sufficient. Partner reporting, technical reviews, safeguards assessments, documentation requirements, and independent verification each contribute a distinct and necessary layer of oversight.
- Sustainability is a core dimension of ESG performance. Ownership arrangements, maintenance responsibilities, stakeholder capacity, and accountability mechanisms are as material to project outcomes as the physical quality of the works themselves.

Conclusion

The Palestine pilot offers a practical illustration of what layered ESG assurance, in conjunction with effective collaboration and operational risk management processes, can accomplish in environments where conventional supervision is constrained. By integrating due diligence, dynamic risk register management, multidisciplinary technical and safeguard review, adaptive implementation, business continuity planning, independent verification, and sustainability planning into a coherent system, the project maintained meaningful oversight under conditions that would have challenged more conventional approaches.

The independent engineering review was an important component of this approach, but its value derived from its integration within a broader framework for identifying risks, assessing technical and safeguard performance, enabling corrective action, and supporting durable project outcomes. The experience provides a practical and transferable model for how physical works and infrastructure projects can maintain ESG integrity in fragile and conflict-affected settings where standard tools of oversight are constrained. In turn, it provides a demonstrable case of how ESG oversight can support trust- and relationship-building that support scaling of climate resilience interventions.

References for further reading

For more information on Al Murunah's work in Palestine, see the project's Palestine baseline brief, project brief, and cross-project impact brief that includes results from Wadi Al-Fari'a. Take the Wadi Al-Fari'a virtual field trip here. Also, see our earlier Project Insight Note about business continuity planning, adaptive management, and early lessons from implementation of Al Murunah in Palestine. See these documents for more information on Al-Murunah's overall approach to co-development and implementation of pilot projects, and consideration of adoption readiness with communities and government. Finally, the Palestine pilot brief will be published in due course by PHG.

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Acknowledgements

The authors acknowledge the contributions and support of Al Murunah's delivery partner, the International Union for Conservation of Nature – Regional Office for West Asia (IUCN-ROWA), as well as the country implementing partner in Palestine, the Palestinian Hydrology Group (PHG). We also thank UK International Development for its financial and technical support for this work.

Citation

Abeyrathna, Wasudha, Umar Liaqat, Stephen Fragaszy, and Vidhisha Samarasekara. 2026. *Beyond Compliance: Strengthening Environmental, Social, Governance and Technical Assurance in Fragile Contexts for Accountable Delivery and Sustainable Impact.* Project Insight Note (PIN) 17. International Water Management Institute.

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