Guidance for Implementing the Impact Assessment Follow-up International Best Practice Principles

March 2024

International Association for Impact Assessment

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in collaboration with

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About this document

The purpose of this document is to provide guidance that might help IA practitioners to operationalize the Impact Assessment Follow-up International Best Practice Principles published by IAIA (hereafter, simply the Principles Document) by providing additional information regarding their application in practice.

The Principles Document (reproduced in Appendix A) defines IA follow-up, outlines objectives for IA follow-up, and explains what it entails with respect to the five key elements of monitoring, evaluation, management, engagement and communication, and governance. It then briefly explains 15 best practice principles.

In this Guidance, each of the 15 Principles are included as published—no amendments are made, nor any repetition of that content (beyond simply re-stating each of the principles when they are addressed).

Approach

A Delphi process, initiated by the two lead authors, was conducted to generate the bulk of the Guidance content, employing a panel of 13 experts on IA follow-up (see the Colophon for the panel members). The input of the panel members was combined with input from the lead authors and a research assistant. Selection criteria for panel members were: researcher of scholarly works on IA follow-up, over 10 years of experience with IA follow-up theory and/or practice, gender balance, geographical spread, and specific IA follow-up focus or expertise (e.g., adaptive management, involvement of Indigenous Peoples, follow-up conducted by independent parties, or for strategic IA applications).

For the first round of the Delphi, the lead authors emailed each of the panelists individually (in December 2022), attaching the Principles Document and inviting their suggestions for Guidance on the 15 principles. The responses were combined into a single document by the lead authors. This document was circulated to the panelists in the second round of the Delphi (in March 2023), seeking feedback by means of individual written reports. The lead authors then revised the guidance document text (during April 2023).

The subsequent draft Guidance was presented at the IAIA23 annual conference (in May 2023) in a workshop session hosted by the lead authors. Around 60 people attended the conference session. Following an introductory presentation of the draft Guidance, questions and comments were received from audience members, which were noted down. This feedback resulted in a reflection on the text: confirmation (there was much of this); need for explanation (some); and suggestions for alteration (some). The feedback resulted in a relatively small number of text amendments and additions, which were circulated to panel members (October 2023). One last revision was carried out by the lead authors (February 2024) after which this finalized Guidance was produced in coordination with IAIA Headquarters.

How to cite this publication

Morrison-Saunders, A., Arts, J. et al (2024). *Guidance for Implementing the Impact Assessment Follow-up International Best Practice Principles*. Reference and Guidance Documents. International Association for Impact Assessment, Fargo (USA).

Structure of the guidance

What is provided here is explanatory content to help IA practitioners understand the 15 principles and how they might serve their own practices. Each of the 15 best practice principles for IA follow-up are addressed with respect to:

1. What the principle is about, including definitions of specific terms or concepts.
2. Why the principle is important.
3. How to operationalize it (in broad terms applicable to international practitioners anywhere in the world).
4. Who is responsible.
5. When it should occur.
6. Tips to help.

Note: it is intended to develop a separate document later containing examples regarding implementation of each principle in practice as well as further reading.

The Principles Document and this Guidance alike are directed to an international audience. Thus, the content is general in nature (i.e., not specific to any IA jurisdiction or development type). It is imperative that key concepts and terminology are clearly defined and used consistently thereafter. Some overarching definitions are provided below with definitions specific to a single principle being included within the text for that principle. Other context for IA follow-up is then provided in terms of purposes for doing it, who does it, and when it occurs.

Overarching definitions

- **Impact assessment (IA) process** is a collective term and refers to formal procedures for carrying out IA (e.g., EIA, SEA, SIA etc.). This would normally start with screening and scoping stages, and then extend throughout the remaining life cycle of development.
- **Program** is used in reference to the entire suite of objectives and activities designed for conducting the IA follow-up process (i.e., not "program" in the sense of strategic environmental assessment (SEA) practice).
- **Activity** refers to any specific follow-up action carried out.
- **Environment/environmental** refers to all components of the surrounding environment affected by a development (e.g., biophysical, social, health, cultural, gender, political, economic aspects of development surroundings) that might be considered in IA follow-up.
- **Development** refers to a project (for operational proposals) or programs, plans, policies (for more strategic-level proposals) for which the IA is undertaken (e.g., an EIA for projects or an SEA for plans), and follow-up is addressing (i.e., during the assessment of proposals leading up to the approval decision and for their implementation thereafter). For brevity and consistency with the Principles Document, hereafter the expression "project or plan" is used to refer to development addressed by IA follow-up.
- **Life cycle of development** refers to the main stages of (i) formulation and design, (ii) approval, (iii) implementation, (iv) operation and (v) decommissioning, including closure and post-closure (where relevant) as depicted in Figure 1.

- **Tiering** refers to the systematic and deliberate transfer of information and issues from one level of planning to another (in an associated policy, plan, program, and project framework) supported by IA. This can also be horizontal, where learning from one project or plan informs another (e.g., this may be particularly relevant for addressing cumulative impacts).
- **Baseline** refers to circumstances prior to implementation of development. It can be related to the five elements of follow-up (explained in the Principles Document; e.g., baseline monitoring, baseline management regimes, baseline community relations/engagement).
- **Adaptive management** refers to deliberate reactive, iterative, ongoing examination, based on systematic monitoring and evaluation activity with feedback (to stakeholders) and learning, rather than managing adaptively (ad hoc learning from mistakes).
- **Stakeholder** refers to any individual or group that has an interest in any given IA follow-up program. Five broad categories of these interested parties can be identified who might lead or be actively involved in carrying out IA follow-up: proponents (and their representatives), IA regulators, community, Indigenous Peoples and Independent parties (each are explained further in Who does IA follow-up below). A sixth stakeholder type are simply the 'interested public' who should be kept informed of events.

Who does IA follow-up?

IA follow-up may be carried out by different parties as outlined below. The 15 principles should be applicable to any or all of these. The roles and responsibilities of IA follow-up parties will depend on the context, scale and scope of the development and related IA follow-up program. Combinations of the following approaches may occur for a given development.

- **Proponent-led follow-up** – consistent with the polluter-pays principle that underpins IA follow-up, it is normally the responsibility of proponents in IA to manage, perform or fund most follow-up activities and to engage and communicate with stakeholders about this.
- **IA regulator-led follow-up** – where regulatory bodies ensure that proponents comply with IA approval conditions as well as learning from experience to improve IA processes in the future.
- **Community-led follow-up** – meaning a body involving the public who may have special knowledge of local areas and are independent of both proponents and regulators. They may have interest in evaluating the performance of proponents and IA regulators in the IA process.
- **Indigenous-led follow-up** – where Indigenous Peoples monitor and evaluate development activity, and recognizing the "urgent need to respect and promote the inherent rights of indigenous peoples which derive from their political, economic and social structures and from their cultures, spiritual traditions, histories and philosophies, especially their rights to their lands, territories and resources" (United Nations Declaration on the Rights of Indigenous Peoples, 2007, p3 [https://social.desa.un.org/sites/default/files/migrated/19/2018/11/UNDRIP_E_web.pdf]
- **Independent-led follow-up** – individuals or groups (e.g., auditors, experts, academia, potentially including also community and/or Indigenous representatives) engaged either to carry out IA follow-up directly or to verify the work of other stakeholders.

Irrespective of which of the above-mentioned parties is leading, that party should establish a dedicated **IA follow-up team**, with sufficient funding and resources, who will be responsible for planning and implementing IA follow-up, including managing stakeholder relationships and conducting periodic reviews of the program.

Why do IA follow-up?

Purposes for doing follow-up relate to the objective of IA follow-up explained in the Principles Document. They may represent a variety of different functions and will vary for each development. Objectives of IA follow-up may include but are not limited to the following considerations.

(i) Identification of environmental aspects and planned control of development and their environmental impacts – e.g., monitoring noise and evaluating whether addition mitigation action is needed. This can be oriented to compliance obligations (with legal/regulatory requirements, additional standards and approval conditions) or to determining and evaluating environmental performance outcomes of the development.

(ii) Maintaining decision-making flexibility and promoting an adaptive management approach to IA and project management – e.g., determining effectiveness of mitigation and enhancement actions implemented to date including need for any additional action.

(iii) Improving scientific and technical knowledge (learning) – e.g., auditing the accuracy of impact predictions or predictive methods used, understanding effectiveness of mitigation and enhancement techniques employed, learning about the ecological system in which development sits, or learning and knowledge enhancement thus improving subsequent assessments and development through tiering.

(iv) Enhancing efficacy and legitimacy of decision making for the specific project or plan and for future IAs.

(v) Earning and maintaining trust of stakeholders including social license to operate.

(vi) Protect and uphold the rights of stakeholders (including Indigenous Peoples).

(vii) Providing reliable and accurate information to all stakeholders about the actual impacts and overall performance of a project or plan and engaging them in adaptive management.

(viii) Improving ongoing environmental management more generally by integrating with other information – e.g., State of the Environment reports or Environmental Management Systems (EMS).

The 15 principles should be applicable to any or all of these purposes.

When does IA follow-up occur?

The formal IA process is the basis for the Principles Document and this Guidance (i.e., starts at the screening stage and then continues for the remaining life cycle of development as depicted in a simple linear fashion in Figure 1). The IA approval decision is when follow-up typically gets formalized (e.g., ideally as a legal requirement for implementation of development).

It is acknowledged that important IA follow-up activities might (and ideally should) commence prior to the approval decision. For example, some follow-up related activities may begin when the IA process begins, including activities such as environmental monitoring and evaluating risks through baseline work, which may include establishing stakeholder relationships and communication protocols, considering alternatives, and designing development proposals to present to the appropriate parties for review, feedback, and, when necessary, the required approvals. Some of these activities may also commence before the formal IA process does.

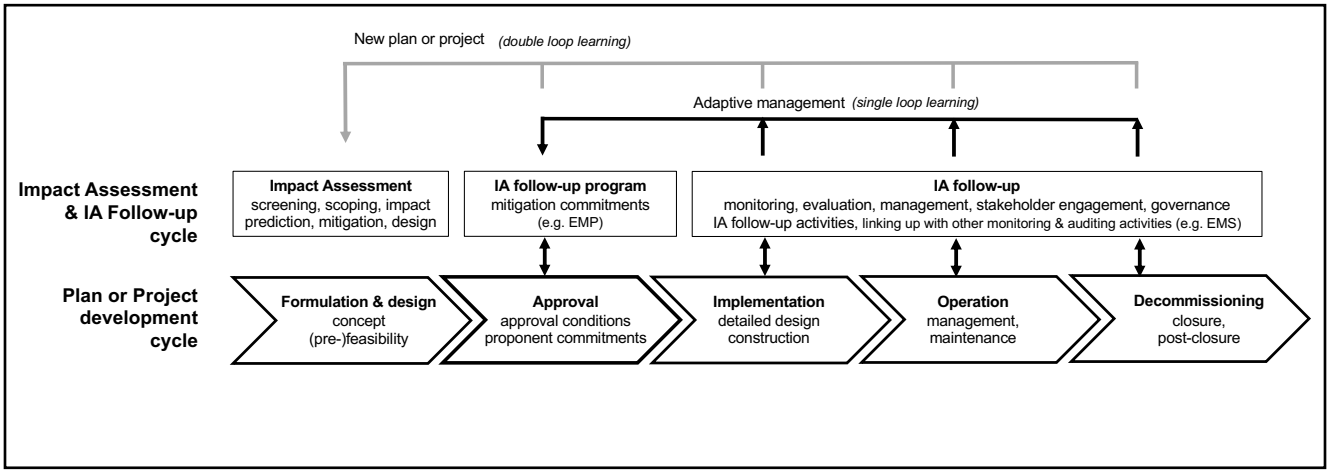

Figure 1: Impact assessment and its follow-up cycle

Source: Morrison-Saunders, A., J. Arts & U. Jha Thakur (forthcoming), Impact Assessment Follow-up, in: T. Fischer, S. Bice, U. Jha Thakur, M. Montaño, B. Noble & F. Retief (eds.): *Impact Assessment Encyclopaedia*, Edward Elgar, Cheltenham.

Principle 1: State the objective of each impact assessment follow-up activity and the overall IA follow-up program

IA follow-up should be objectives-led and goal-oriented.

1.1 What

Objectives of doing follow-up can vary both at the program and activity level and are often interdependent and related to internal and external policies and procedures (see Box 1.1 for definitions). Some objectives may be mandated by formal regulations, permits, or IA approval conditions. Other objectives may be designed at the discretion of proponents and others carrying out follow-up — e.g., learning on technical matters to verify impact prediction models. Objectives should be periodically reviewed (e.g., in response to IA follow-up findings and performance outcomes). Program objectives are unlikely to change substantially over the life cycle of development, but activity level objectives might, as part of learning and adaptive management.

Box 1.1: Definitions for IA follow-up objectives

Follow-up program objectives refer to the purposes underpinning the entire suite of follow-up activities being undertaken over the life cycle of the development. These should be set early in the IA process. Program objectives will encompass the five elements of IA follow-up (monitoring, evaluation, management, engagement and communication, governance).

An IA follow-up ***activity objective*** refers to the purpose of a specific follow-up activity (e.g., monitoring water quality in the wastewater discharge from an industrial plant, employing local people, rehabilitating and restoring ecological habitat following strip mining so as to return the canopy cover to match surrounding forest, or communicating follow-up results to the community during meetings). Activity objectives may be compliance- or outcomes-related or embrace both simultaneously (e.g., mitigating noise by erecting barriers beside a highway and monitoring noise levels experienced by residents behind these barriers).

Objectives-led and goal-oriented simply means having a clear objective for follow-up and then doing it, focusing on the goals set.

1.2 Why

The purpose of objective-led IA follow-up is to have a clear, considered, manageable program for follow-up that is auditable, justifiable, and legitimate.

1.3 How

The number of objectives should be kept to a manageable and achievable level, proportionate to the importance established when preparing the IA follow-up program—i.e., significance or risk associated with issues to be addressed. Consideration should be given to level of uncertainty and potential for (unanticipated) cumulative and holistic impacts as well as delivering on what the community wants or needs. A systematically organized, documented, and communicated statement of the objectives of IA follow-up is needed. This should be a plain language dynamic document of the multiple objectives of a follow-up plan including the program and its activities, commitments, and time frames.

Individual objectives for follow-up should be stated succinctly and unambiguously along with any essential explanatory information. Key considerations include:

- Any applicable legal prescriptions and approvals (for compliance monitoring).
- Relevant performance standards to meet objectives (for performance or outcomes monitoring).
- Reference to any important gaps in knowledge, uncertainties and risks raised (for improving knowledge and learning).
- Reference to the approval decision-making process (for clarity regarding communication or stakeholder engagement).

This objective-led approach lends itself to adaptive management.

1.4 Who

All IA stakeholders should have an opportunity to contribute to establishing follow-up objectives. This will typically occur in the IA stages leading up to the approval decision (commencing during screening/scoping) when the IA follow-up program is developed and formulated. Stakeholder feedback and engagement should continue during implementation for the remainder of the life cycle of development. IA follow-up objectives will vary according to who does IA follow-up (proponents, regulators, community, Indigenous Peoples, independent party). If follow-up objectives are collaboratively set, then there is greater chance of buy-in and implementation by all stakeholders.

A dedicated team should be responsible for planning and implementing follow-up, including stakeholder relationship and conducting periodic reviews of the program. The composition of this team will vary according to context-specific circumstances and the life of the project or plan.

1.5 When

Program objectives are developed before activity objectives—which are operationalizing the program objectives—and which are then nested within the program. Objectives for IA follow-up should be addressed whenever any activity is undertaken—e.g., pre-approval (screening, scoping, preparation of impact statement), right through to ongoing adaptive management and modification of follow-up programs post-closure. Allow time and budget for implementation of IA follow-up objectives and to establish relationships and baselines (which may commence before the formal IA process does). Continue follow-up programming throughout all stages of IA and the life cycle of development, updating and adapting the follow-up program as appropriate (Figure 1).

1.6 Tips

- Develop IA follow-up objectives in consultation with key stakeholders and provide opportunities for periodic review and evaluation.
- Ensure that objectives for IA follow-up are consistent with the purpose of the plan or project (e.g. strategic direction), and any associated policies for the development or its environmental setting.
- Establish objectives for relevant levels and functions of the development, giving consideration to compliance obligations (both mandatory legal and other requirements the development is intended to comply with).
- Use databases and spreadsheets to keep track of objectives and associated activities, including numbering and the date so that a record is maintained of how thinking and progress happened over time.
- Have a clear mechanism for recording when an individual objective has been fully met, so that it is no longer necessary to include that matter in ongoing follow-up and reporting.

Principle 2: Be tailored to context

IA follow-up should be "fit-for-purpose," recognizing that individual applications of IA follow-up will vary according to the specific contextual factors at play (e.g., project or plan type or locality, significance of impacts or issues arising, or institutional setting).

2.1 What

Context may include regulatory or institutional factors established for the environment affected by projects or plans relevant to the purpose of the development and affected by or capable of affecting the development (Figure 2). The follow-up activities and the associated monitoring indicators and evaluation parameters should reflect the objectives, and the nature and level of detail of the program. They should be proportionate to the impacts and risks identified in the IA follow-up program at all phases, recognizing that they likely will change over time. It is important to ensure that follow-up activities pertain to the geographical zone of influence of a project or plan on the environment as opposed to administrative or site boundaries (i.e., don't stop at the site fence or the local administrative border). It is also important to take into account local environmental conditions and stakeholders, including technical and financial capacity as well as the specificity of the actual project or plan. Some considerations for all IA follow-up programs include regulatory requirements and environmental impact and the degree to which avoidance/mitigation of the key adverse impacts is effective and feasible.

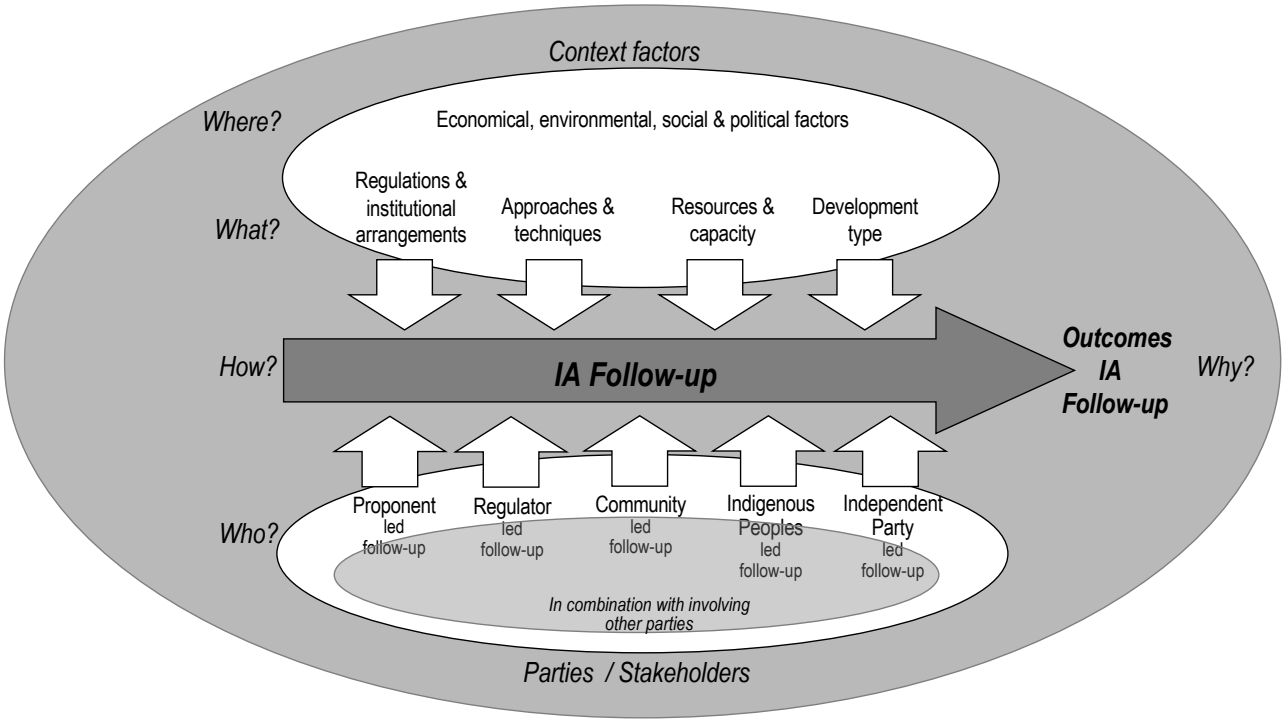

Figure 2: Context factors to consider for IA follow-up

Source: Morrison-Saunders, A., J. Arts & U. Jha Thakur (forthcoming), Impact Assessment Follow-up, in: T. Fischer, S. Bice, U. Jha Thakur, M. Montaño, B. Noble & F. Retief (eds.): *Impact Assessment Encyclopaedia*, Edward Elgar, Cheltenham.

2.2 Why

The main reasons to consider the context of an IA follow-up program is to ensure:

- Relevance to the development and to stakeholders.
- That costs of follow-up are reasonable in the circumstances and resources available to fully implement the follow-up program (e.g. given existing management/governance structures).
- That the overall program and individual activities are fit for purpose.
- That inadequacy and inefficiencies that arise from generic programs are mitigated.

A good understanding of the local context (including local knowledge) and adherence to best practice will result in a better understanding of impact significance and potentially shape effective follow-up. For example, place-based knowledge may provide important insights into events that are impacted, interanimation between individuals and place, and the interconnections with other places, which potentially influence ongoing adaptive management.

2.3 How

There may be differences regarding the contextual factors, particularly social, cultural and political but also the technical aspects of IA too, such as scope, baseline, spatial and temporal boundaries, and determinations regarding magnitude and significance. Stakeholder engagement is a key way to put things into context. Some suggestions here include, for example:

- Define the "boundaries" of cause-effect relationships pertaining to the program that can be addressed through management, and set clear responsibilities.
- Focus on measures to follow up on the identified potential significant environmental effects and the implementation and effectiveness of mitigation or enhancement measures.
- Adapt the follow-up program including governance structures for ease of implementation (e.g., performance standards and organizational roles can significantly shape the feasibility and validity of certain activities).

Actions and activities of follow-up programs should increase when some of the following exists:

- Significant adverse effects.
- Cumulative and collective/holistic adverse effects.
- High uncertainty.
- Threats to sensitive or vulnerable components of the environment and/or community.
- New methods or understanding emerge.

These modifiers may be needed in any phase or sub-phase of IA follow-up programs.

2.4 Who

The team tasked with the IA and follow-up in consultation with stakeholders for the specific project or plan and its environmental, cultural and jurisdictional setting. If relevant to the case, special attention should be given to the cultures of Indigenous communities and their distinctiveness, including their governments, social institutions, and communities. This applies to the world views that inform and structure entire IA systems such as:

- Identification and assessment of impacts.
- Engagement methodologies and knowledge gaps.
- Monitoring and evaluation of impacts.

Arguably most important when Indigenous peoples and cultures are involved is that there are likely to be differences regarding the contextual factors. This includes the technical aspects of IA too, such as scope, baseline, spatial and temporal boundaries, and determinations regarding magnitude and significance.

2.5 When

Tailoring the context of follow-up programs should be required for all phases of the development life cycle.

2.6 Tips

- Clearly define or explain the context (e.g. legal, environmental, technological, cultural, political) before implementation (i.e., in the IA stages preceding the approval decision) and update this as needed once development activity proceeds.
- Pay careful attention to cultural context and following appropriate practices, including effective communication strategies.
- Communities and Indigenous Peoples can play an active and integral role in the design and conduct of IA follow-up, by conducting relevant activities independently or in collaboration with proponents and/or regulatory authorities.
- Consider the scale of the project or plan involved when designing the scope of follow-up and the level and type of resources allocated to it.
- Where appropriate, link to or embed IA follow-up in management systems established by the proponent (e.g., ISO 14001) and any other stakeholder organizations responsible for elements of the program.

Principle 3: Commence early in the impact assessment process

Timing is vital in IA follow-up and developing a follow-up program should start early in the IA process (e.g., during screening and scoping) and thereafter be acted upon as appropriate.

3.1 What

Commencing early allows the establishment of a knowledge base (arising from baseline monitoring) and building trust in stakeholder relationships.

3.2 Why

Follow-up is about developing the long view through the life of the project or plan, and the sooner issues become understood, the sooner the scale, scope, and nature of appropriate follow-up activities can be established.

3.3 How

Commence early by reviewing existing environmental data sets, establishing baselines, defining project or plan objectives, initiating stakeholder partnerships, and scoping alternatives. Outline potential IA follow-up needs at the same time that development activity is being planned or designed and the environmental consequences are being considered.

3.4 Who

The team responsible for the IA follow-up program in consultation with other stakeholders.

3.5 When

Start planning a realistic program that will inter-connect with the key IA stages from the start and closing the life cycle (Figure 1). This helps to control risks and potentially flag issues. However, the formal establishment of the IA follow-up program for projects is with the development approval decision. For follow-up of plans, where there is a continuous planning process (with periodic review and revision taking place), follow-up should be continuous across all phases of such cycles (i.e., not necessarily tied to a particular approval decision as a starting or demarcation point).

3.6 Tips

- Utilize pre-feasibility studies to identify (scope) the key environmental attributes that will need to be monitored as part of the baseline, and ensure these considerations are subsequently included in project or plan design and feasibility determinations.
- Appoint a follow-up practitioner or specialist reviewer in the initial planning and proposal design team to aid with IA follow-up thinking and in linking follow-up preparation to implementation realities.
- Engage stakeholders early to build relationships between the parties that will be involved in implementation of projects or plans and the associated IA follow-up activities.
- Ensure successful handover of IA follow-up from early planning and design phases to each of the subsequent IA phases (e.g., having a formal strategy in place for this can be helpful).
- Ensure that the design of baseline studies to inform the IA is linked to the design of post-implementation monitoring activities—thus consistency of before and after-studies can be ensured (e.g., through Before-After-Control-Impact (BACI) monitoring).

Principle 4: Be carried out throughout the project or plan life cycle

IA follow-up should be carried out on an iterative and ongoing basis. IA follow-up provisions should be established by the time that projects or plans are approved. Implementation of follow-up actions should commence and continue through the construction, operation, and, where relevant, the decommissioning phases of development.

4.1 What

Follow-up thinking must grow in detail as the IA process and the project or plan progresses, especially through the formal IA process. This should start in the planning stage of the development and continue through scoping, impact forecasting, significance evaluation, and impact management decisions. Although actions will be implemented at different stages in the life cycle, the program of activities still needs to be planned from the earliest stages of the IA, to be rolled out and reviewed during the life cycle as appropriate (Figure 1). This iterative aspect relates closely to the governance element of IA follow-up.

4.2 Why

There is always some IA follow-up consideration of relevance to each part of the development life cycle. Aside from technological and scientific advancements that may have improved since the development began, new understanding of cultural, ecological, or health impacts or outcomes and how to effectively deal with them may have emerged. Thus, follow-up throughout the development maximizes the potential to learn from experience. New insights in uncertainty (unforeseen impacts—"unknown unknowns"), changes in policies and regulations, and cumulative and residual impacts may also require adaptive management at different stages of the development life cycle.

4.3 How

Follow-up objectives and (sub)programs for each of the development implementation stages—planning, scoping, screening, preparation of impact statement, approval, implementation/construction, operation and decommissioning phases—should be clearly defined, and specific benchmarks and thresholds set for each of these phases. The reporting of follow-up indicators and findings should be communicated at each phase with a process for review and feedback. Clear governance mechanisms should be created for carrying out follow-up throughout the project life cycle. This might include independent oversight and auditing to verify progress, or requiring financial guarantees (e.g., provision of funds or bonds by the proponent) to ensure ongoing implementation of follow-up activities.

4.4 Who

All IA follow-up stakeholders, allowing for changes in those involved over time. Ownership changes are common, for example, when a proponent organization is purchased by another or components of a development are sold to new owners/purchasers once constructed, and communities change too. Ensuring continuity and transfer of follow-up responsibility between changing stakeholders is important. Political changes may require adjustments to IA follow-up programs (especially with respect to plans or policies).

4.5 When

Explain and address the importance of IA follow-up design for the development life cycle in the initial program. The nature and intensity of follow-up activities will likely vary during a project or plan life cycle, but there are always objectives and activities of relevance to be considered and acted upon according to the five elements (monitoring, evaluation, management, communication, and governance). For example, during construction of an energy or infrastructure project there is usually a need to closely supervise workings such as vegetation clearing, earth moving, transport of materials, and equipment and people. Such supervision could include full-time personnel on site and intense or continuous sampling of water and air, for example. For the operational phase of projects such as highways and wind farms, other topics would be more important to follow-up, for instance road kills and bird and bat deaths in wind turbines.

4.6 Tips

- Embed proponent-led follow-up programs within the internal working modes of the organization (e.g., follow-up objectives, performance and outcomes can be linked with EMPs—environmental management plans, EMS—environmental management systems and/or ESG—environmental-social-governance reporting responsibilities).
- Build and maintain long-term relationships with all stakeholders (e.g., helps to prepare for the post-development realities, including adaptive management).
- Map indicator values over time (e.g., through Geographic Information Systems—GIS) to facilitate better examination and understanding of geographical changes over time (e.g., identification of specific areas of environmental impact/change), as well as to facilitate stakeholder communication.
- Ensure long-term management plans for follow-up programs are subject to ongoing evaluation and feedback on component activities (i.e., for continuous improvement within the program but also to provide information for the wider practitioner community).
- Think a step ahead to ensure continuity and linkage of IA follow-up and development phases (e.g., think about safeguards in the design stage which can be used in the procurement stage).

Principle 5: Be transparent

All IA follow-up arrangements (e.g., design, processes and governance) and implementation actions and their outcomes (monitoring, evaluation, management and engagement with stakeholders,) should be publicly disclosed. All stakeholders have a right to feedback on the IA process.

5.1 What

The emphasis of transparency is being clear about what follow-up (program objectives and activities) are actually being planned, undertaken and monitored, and what is being learned and sharing this knowledge with all stakeholders, researchers, and other interested parties. It also necessitates sound record keeping. A careful distribution of responsibilities and tasks—checks and balances—might be helpful to create transparency throughout the process of IA follow-up.

5.2 Why

Public disclosure and the right to feedback is a given right (e.g., as provided for in the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters 1998). However, this alone does not ensure full transparency and needs explicit attention. Being open, being clear and ensuring public disclosure promotes trust, goodwill (acceptance), may induce proactive thinking and timely adaptive management and therefore may reduce residual impacts. Trust is the most important currency in impact assessment, especially for potentially affected parties and stakeholders. Transparency fosters (joint) learning to improve current practice and therefore future practice, regulatory oversight and should empower stakeholders. Dissemination is vital from the perspective of science and future learning.

5.3 How

The follow-up program (containing clear objectives and activities) should be drafted and the latest version should be circulated at each stage of the IA process, and should be open for stakeholder review and comment where appropriate. Appropriate publication of monitoring and performance data against performance criteria should occur throughout the life cycle of the development. Design and safeguard the involvement of all parties to the process by "mapping" stakeholders and their information needs, and ensure careful data management with different packaging of information depending on the audience. Transparency necessitates that studies and datasets are provided in a way that enables various potential users to work with the information as necessary—e.g., easily accessible information in generic software formats.

It is good practice to provide local and regional communication to ensure that local and regional stakeholders are aware of follow-up programs

including relevant data and review processes in a form compatible with stakeholders' information culture.

5.4 Who

All parties involved in follow-up and at all stages of the process have a responsibility for transparency. The roles of the different stakeholders are inherently different and combined efforts are needed to ensure that follow-up programs are transparent. Clear demarcation of responsibilities and tasks is crucial for transparency, and digitization (e.g., online platforms and repositories) might be also helpful in enhancing transparency.

5.5 When

Transparency of IA follow-up is necessary at all times through the life cycle of development.

5.6 Tips

- Be clear on when an IA follow-up program changes and is updated.
- Develop guidance, including permission protocols, on data sharing during the development planning stages, to enable (i) access by proponents, regulators or other interested parties for developing their own IA follow-up programs, and (ii) so that other researchers can repeat the work or feed into studies designed to examine longitudinal trends.
- Ensure studies and datasets are available to the public via specific means that stakeholders, regulators, proponents, researchers, and non-governmental organization are likely to use when searching for information.
- Communicate with local and regional stakeholders (in forms compatible with their information culture or needs) to ensure they are aware of follow-up programs.
- Hold regular (e.g., annual) workshops to disseminate the results of the follow-up studies for the previous year during which the responsible parties (proponent or equivalent) present and discuss the findings with stakeholders regarding (i) how best to understand what is happening; and (ii) what to do next (e.g., adaptive management action).

Principle 6: Be accessible to all impact assessment stakeholders

IA follow-up information should be easy to access and to understand. Archiving, retrieval and disclosure of follow-up information requires careful attention. As a minimum, stakeholders should be informed about IA follow-up activities and outcomes, and to be provided with opportunities to give input or feedback; but active engagement in follow-up program design and implementation is desirable.

6.1 What

Accessibility is about the manner in which IA follow-up material is disclosed or made available. There are several considerations beyond transparency (Principle 5). Information must be readily available, understandable, and relevant with enough time provided to stakeholders to read, absorb, and seek advice before feedback deadlines. The emphasis of accessibility is thus on the meaning, understanding and availability of sufficient, specific and detailed follow-up information—objectives, activities, performance criteria, and data. There should be free and open access to technical reports, availability of summary reports in plain language, culturally appropriate material when engaging with community stakeholders (e.g., in relation to Indigenous Peoples), and active responses to feedback as part of the follow-up program.

6.2 Why

Constructive engagement with all stakeholders in the IA process, especially those potentially directly affected, requires that information about key follow-up activities is in a form (both in terms of its physical form and the nature/character of the information itself) that allows stakeholders to access it. Stakeholder engagement should be socially and culturally appropriate. IA follow-up-related data are often used in other accountability mechanisms including development design and planning, testing performance criteria and company reporting (e.g., as part of an EMS) as well as auditing/supervision/overseeing both internal and external (regulatory, independent expert and stakeholders).

6.3 How

When providing information about the development's performance, proponents should be specific and provide easily accessible and detailed information in plain language (including visual or verbal documentation and languages other than the majority language(s) where appropriate). Access to information and opportunities to provide feedback should be customized for different groups, with greater attention given to individuals directly impacted by a project or plan relative to those who are indirectly impacted.

6.4 Who

Proponents, regulators, and independent experts should create information systems that enable community members and Indigenous Peoples to understand the IA follow-up process which functions during the life cycle of the development. It is important that all potentially affected individuals and groups are adequately understood and engaged.

6.5 When

IA processes can extend for multiple years and accessibility should be maintained throughout the plan or project life and beyond to become part of regional baseline data. It should be ensured that any follow-up material does not become inaccessible as a result of updates/advancements in digital technologies. Another issue is the provision of time frames for comment that are reasonable from the point of view of the recipient of the information.

6.6 Tips

- Make monitoring indicators as specific as possible to ensure that they are well understood and so that associated changes in indicator values can be presented in a meaningful/non-technical way to the layperson.
- Create a readily available and advertised mechanism (e.g. through traditional and social media) for stakeholder access and feedback (e.g. online site hosted by the regulator or proponent for electronic access; public library or similar community resource center if printed documents are in use).
- Engage community stakeholders in the relevant follow-up processes (e.g., data collection, citizen science, change evaluation or potential recommendations for remedial action) through social media.
- Produce plain language/non-technical versions of IA follow-up outcome reporting including, for example, the use of infographics to summarize follow-up findings so that these are rapidly absorbed and easily understood by all stakeholders.
- Make follow-up information available to other proponents to support the assessment of cumulative effects as well as informing the baseline studies of the next assessment.

Principle 7: Provide clear accountability for impact assessment follow-up responsibilities

Ensure that there is clear accountability established in the governance arrangements for IA follow-up. Enabling a two-way flow of communication between stakeholders who are affected and those responsible for IA follow-up and/or the development is important.

7.1 What

The purpose is to clarify the roles and responsibilities of the main parties—proponent, regulator, and stakeholders as well as independent experts (i.e., the key element of governance in IA follow-up). For this reason, the careful design of governance while preparing the IA follow-up, and explicitly documenting this with the approval decision, is vital.

The follow-up program needs to provide clear provisions for the development life cycle. In relation to the key elements of IA follow-up: it needs to be clear who exactly will be responsible for monitoring activity, who must receive the monitoring results, who is responsible for evaluation of the monitoring results, who for coming up with management activities in response to the evaluation results, and who for engaging the public and reporting to stakeholders.

7.2 Why

Clear accountability is an essential pre-condition for achieving the objectives of IA follow-up and an enabler of other Principles for follow-up. This includes ensuring that requirements are legally enforceable and minimizing discretionary power to the greatest extent possible.

7.3 How

Recognizing that each project is context-specific (Principle 2), compliance monitoring and enforcement components and related activities for specific projects or plans should be clearly identified, along with the parties responsible for their implementation. This would normally include a description of all their pre-defined roles and tasks within the context of the development along with any financial responsibilities associated with IA follow-up. Each identified party's responsibilities related to essential components of an effective IA follow-up (including compliance and enforcement) framework should be defined and discussed in relation to all the other parties. If roles for certain parties are not pre-defined, then these should be defined for the specific project/plan. It can be helpful to apply a specific method such as a responsibility assignment matrix for identifying and providing clear responsibility and accountability for all parties involved with IA follow-up.

Compliance requirements should be clearly outlined in Terms of Reference for proponents and their Contractors and appropriate resources or means of documenting activities be provided. Regulators may play a dual role as mediator between proponents and other stakeholders (e.g., they may need to hold proponents accountable when they fail to uphold

legislative responsibilities, while reaching out to and supporting community members and Indigenous Peoples). Independent parties may have specific reporting or engagement responsibilities to deliver. Community members and Indigenous Peoples may be expected to contribute constructively to IA follow-up (e.g., provide feedback or additional information to assist proponents and regulators in achieving good outcomes) or be doing it themselves.

7.4 Who

It is advisable to identify the party leading the follow-up, e.g.: proponents, regulators, community, Indigenous Peoples, independent parties, or combinations thereof. Importantly, roles and responsibilities will depend on the type, scale, scope, and context of the development. Smaller scale developments may need fewer job descriptions than those in large-scale developments and at different stages throughout the life cycle. However, as a minimum, two key roles should be specified—the party responsible for implementing the IA program requirements (typically the proponent), and the party responsible for verifying that the requirements are implemented (typically the IA regulator, but this can also be an independent body).

7.5 When

Unlike the preparation and delivery of an IA report for approval, most follow-up activities and reporting will be continuing actions over an extended period of time: for monitoring of major projects, it may be decades. The responsibilities for specific activities, and for managing the overall program, must be established from the start of the process and at the latest be established in the IA follow-up program (i.e., when the approval decision is taken). This will naturally lead on to identifying who is to be responsible for resourcing/funding the follow-up program, and outlining the principles that should govern the long-term implementation and management of the follow-up activities (e.g., safeguarding data storage and access in the long term; maintaining secure chain of management despite changes in personnel).

7.6 Tips

- Maintain clear and understandable communication lines for the roles, responsibilities, and accountability for IA follow-up throughout the process, including participation and communication with community stakeholders.
- Identify stakeholders (e.g., local communities and Indigenous Peoples) early in IA and assign them with follow-up roles and responsibilities (e.g., this may help them to hold proponents and regulators to account for undertaking follow-up responsibilities throughout the project or plan life cycle).
- Clearly distinguish (and clarify where necessary) the legally-binding roles and responsibilities for IA follow-up, as well as encourage inclusion of additional environmental and social responsibility initiatives in follow-up programs that extend beyond minimum compliance requirements.
- Make stakeholders (especially proponents) aware that IA accountability is related to other accountability tools (e.g., ISO14001, the Global Reporting Initiative—GRI reporting, stock-exchange filings, etc.) meaning that IA follow-up data may be used in other accountability platforms and vice versa (thus, it is important to create information systems that enable tiering of information between accountability tools).
- Provide grievance or similar feedback mechanisms for affected stakeholders and have a formal procedure in place for documenting how proponents or regulators act in response to such complaints received.

Principle 8: Provide clear, pre-defined, and well-justified performance criteria

Follow-up actions should produce useful information and outcomes which can be easily measured and unambiguously appraised against clear and pre-defined performance criteria. The performance criteria should be rigorous and reflect best practice (e.g., through adopting well-defined methodologies or approaches to monitoring, evaluation, management, communication and engagement).

8.1 What

Performance criteria establish an agreed or acceptable level of impact or outcome that must be achieved. They can be quantitative or qualitative measures of outcomes (e.g., community satisfaction) and also process criteria (reports completed within x days).

They may comprise two forms—threshold and trigger indicators—regarding what constitutes significant environmental change for performance (see Box 8.1 for definitions).

Box 8.1: Definitions for performance criteria

Threshold indicators are selected to represent the limit of acceptable impact. Further change beyond a pre-defined threshold means that the expected or desired environmental outcome is not being met and there is likely to be a significant adverse impact on the environment.

Trigger indicators can be set to forewarn that an impact is approaching the threshold for acceptable change, thus enabling additional mitigation measures to be applied if warranted.

8.2 Why

Establishing clarity about the expected performance or environmental outcomes of the development to all stakeholders before development proceeds ensures transparency and accountability. This will enable the proponent to act proactively, and the regulator to act consistently and to empower the other stakeholders. Performance criteria provide for legitimacy and "social license to operate," including a defensible basis for proponents who demonstrate compliance with them during implementation of development.

8.3 How

Performance criteria used in IA follow-up actions or programs should be rigorous and reflect best practice. Both trigger and threshold indicators should be used where appropriate. Often the performance criteria will already be specified in IA regulations or guidance for significance determinations in relation to screening and scoping considerations. Otherwise, they can be determined through discussions with stakeholders.

They should be enacted through well-defined methodologies or approaches to monitoring, evaluation, management, communication, and engagement. Such actions should produce useful information and outcomes which can be easily measured and unambiguously appraised against clear criteria. This might involve adherence to quantitative thresholds or standards that can be set out clearly.

In other cases, the outcomes may require evaluation by stakeholders, in which case the way this will be carried out should be described. For example, it may involve establishing a permanent group of community representatives, so the membership, function, and operational guidelines of such a group will need to be outlined early in the process.

8.4 Who

While all stakeholders may have a role to play in the establishment of performance criteria, a particular responsibility rests with those establishing the IA follow-up program and the person or organization that signs it off (e.g., regulator) as part of IA approval decision conditions. Specific roles and responsibilities will depend on the type, scale, scope and context of the development.

8.5 When

Performance criteria should be included as part of the approval decision, when the IA follow-up program is established. They may be formally reviewed and revised periodically throughout the life cycle of the development as part of adaptive management and being flexible according to emerging needs (e.g., new knowledge about environment or cumulative impact that unfolds over time). Doing so provides those potentially affected with the ability to determine whether the proposal as a whole satisfies their views of sustainable development.

8.6 Tips

- Establish explicit auditing and evaluation criteria (e.g., employment or health outcomes for a community such as prediction within +/- 10% regarded as accurate prediction) in addition to identifying key performance indicators (KPIs) for monitoring and auditing (which can be complicated by their spread across assessment documents and by changes over time).
- Involve Indigenous Peoples and other place-dependent stakeholders who may provide alternative or complementary performance criteria to operate alongside those derived from technical experts or professions.
- Utilize the best available scientific and local information (e.g., Indigenous knowledge) to guide monitoring programs (i.e., all approaches and methods used need to be sound and clearly reported).
- Link monitoring indicators to measurable international and national thresholds/standards (e.g., achievement of World Health Organization air quality standards, or the Sustainable Development Goals).
- Provide monitoring indicators in SMART format (Specific, Measurable, Achievable, Relevant and Timely).

Principle 9: Specify enforcement provisions

In addition to promoting "good behavior," it is also important to identify the consequences for non-compliance within IA follow-up provisions.

9.1 What

Enforcement provisions refers to mechanisms employed by regulators and other stakeholders to achieve compliance and correct or halt non-compliance situations regarding expected environmental performance. They may take hard or soft forms, or a hybrid of these. Hard enforcement refers to strict command and control measures laid out in legislation or regulations (e.g., including fines, criminal/civil prosecutions, cease work orders or revoking of licenses). Soft enforcement arises from self-regulation, education/awareness campaigns and social pressure (e.g., associated with complaints and reputational risk). Hybrid enforcement combines elements of both the other forms, often being captured in the form of agreements, contracts or Memoranda of Understanding, potentially backed up by contract law. Typically, hard forms of enforcement need to be in place in order for soft or hybrid forms to come into effect.

9.2 Why

This principle can be explicitly linked with the "governance" element—the processes and arrangements enabling the careful implementation of IA follow-up. Enforcement will always be dependent on the legal requirements of each jurisdiction. Ensuring ongoing community trust and support is important—ensuring legitimacy and maintaining a "social license to operate."

9.3 How

Hard forms of enforcement are likely to be already in existence within IA and other applicable legislation. Procedural enforcement measures specific to follow-up of projects and plans are likely to be included and explained in guidance documents provided by IA regulators. Substantive IA follow-up enforcement provisions will usually be specified in relevant legislation and may also be included in the approval decision itself (e.g., permit requirements).

Contractual agreements between proponents and other stakeholders can assist in achieving accountability as they provide an opportunity to clearly spell out and allocate IA follow-up responsibilities and to set out consequence for failure to comply with obligations, including graduated responses that provide opportunities to remedy failure. Opportunity may exist to link IA follow-up with an organization's Environmental Management System to strengthen the self-regulation and enforcement of the proponent and create a corporate culture for follow-up. Establishment of a mechanism for raising complaints by stakeholders and for addressing grievances is vital for ensuring community support and trust.

9.4 Who

All stakeholders are relevant here. Proponents often apply industry or self-regulation and a corporate culture of (adhering to and enhancing) IA follow-

up. This also relates to (sub)contractors working for the proponent. Regulators should establish clear requirements, carry out surveillance of these with a systematic and transparent approach, and enforce them with corrective actions. The community or Indigenous Peoples can raise complaints and keep an eye on the development and the surrounding environment. An independent checker may be involved in compliance monitoring and auditing functions.

9.5 When

Regulatory requirements and the related enforcement mechanisms should be clearly described in the IA follow-up program as soon as key decisions have been made regarding a proposal (e.g., conditions linked to approval decision, etc.), along with the statutory provisions for not meeting those conditions. Enforcement explicitly relates to all stages of a development's life cycle. In addition, the social license to operate, especially for major projects close to communities, or based on community land and resources, should be recognized as an important element of (social) enforcement on a continuous or ongoing basis.

9.6 Tips

- Establish an internal compliance policy (e.g., especially within proponent organizations) which is actively promoted as a workplace culture and which defines the responsibilities for remedial actions where environmental targets are not achieved.
- Enhance enforcement through results-based financial incentives (i.e., "promoting good behavior') and internal compliance (i.e., "consequences for non-compliance").
- Establish procedures for addressing non-compliance with IA follow-up provisions on a spectrum of increasing intervention (i.e. which might range from: (i) triggering of a complaints mechanism and an opportunity for the party which is in default to remedy its failure; (ii) progressing to mediation to try and achieve an amicable resolution; and (iii) only invoking specific penalties for non-compliance with referral to the courts as a last resort).
- Regulators should consider including administrative and substantive penalties within development approvals for failures in implementing both proponent regarding the follow-up program, where IA legislation or regulations do not already specify this.
- Ensure that enforcement provisions are directly related to established performance criteria.

Principle 10: Promote continuous learning from experience to improve future practice

IA follow-up should enable learning from experience through active feedback. It should not be static. Such learning may inform the management of other similar projects or plans regardless of whether they are operated by the same or other proponents, to improve IA practice.

10.1 What

Continuous learning throughout the development life cycle (Figure 1) means ability to react in an appropriate time frame as issues arise (e.g., not minute by minute or hour by hour, but also not in a static fashion based on a 5- or 10-year review process). This regards not only the (management of the) specific project or plan but also overall IA practice.

10.2 Why

Continuous learning should be an IA follow-up objective to prevent IA being just a pro forma exercise and to promote ongoing improvement and advancement of future practices. The publication of information on follow-up activities, especially regarding their evaluative component and regarding changes made, is vital to help improve environmental outcomes. This includes the development itself (single loop learning) and learning to inform future IA practices which may also extend to inform other levels of the IA system through tiering (double loop learning; Figure 1).

10.3 How

It is important that the stakeholders who receive the feedback have the capacity to assimilate the information into their future work. Thus, this should be part of the design of IA follow-up programs at the outset. Long-term follow-up programs should ensure ongoing evaluation and feedback of activities, for continuous improvement within the program but also to provide information for the wider practitioner community. This extends to learning that can be used to enhance the IA system it operates under (double loop learning).

10.4 Who

All stakeholders are involved in and can benefit from the learning process, which is inherently interdependent. For proponents, it might result in more efficient and cost-effective ways to achieve expected environmental performance outcomes. They may also use the results of follow-up programs to support claims of mitigation or enhancement effectiveness for future projects. Sharing of learning between proponents may assist others as well as management of cumulative impacts. For regulators, particularly IA agencies,

follow-up is essential to improve practice. Regulator learning includes adjustments in IA and follow-up arrangements established for future developments, as well as review and updating of IA guidance, policy or legislation to embrace enhancements in approaches taken. IA agencies should use follow-up studies to require better IAs from future project proposals. In order for learning to actually enhance follow-up practice in protecting the environment, a body (e.g., IA agency) is required which actually has an overview of a system. Community members and Indigenous Peoples may learn about the performance of individual developments, about IA processes as well as gain new environmental knowledge more generally.

10.5 When

Throughout the life cycle of the development with wider dissemination of information allowing learning to continue into the future. Learnings from one development can inform similar future developments or those taking place in the same environmental setting.

10.6 Tips

- Coordinate methods for relevant environmental monitoring (including spatial) data and evaluation results across planning hierarchies and sectors, and enable centralized access to this data and information (i.e., this approach enables a rapid and systematic way of addressing ongoing monitoring limitations and remaining data gaps).
- Share key learnings from follow-up activities (opportunities and challenges in data gathering, evaluation, management, and governance) in reporting and/or meetings or conferences which includes clear and specific examples about what has learned from previous projects (e.g. by proponents), and how that changed the approach in the current project.
- Designate an in-house "follow-up champion" within relevant stakeholder organizations to help with monitoring effectiveness and exchange of ideas and learnings.
- Link IA follow-up with the notion of "continuous improvement" of the plan–do–check–act (PDCA) cycle so that learning can improve both project management as well as future practice by others.
- Establish a central independent advisory body (e.g., like the Netherlands Commission for Environmental Assessment, or monitoring agencies established in some IA approvals in Canada) to offer support and maintain data and good practices in facilitating learning for all stakeholders.

Principle 11: Facilitate adaptive management

Mitigation provisions for a project or plan should be adjustable as needed. Learning derived from IA follow-up should inform ongoing adaptive management of the project or plan as necessary, in order to achieve its objectives. IA follow-up would ideally also enable unexpected consequences to be revealed and addressed as appropriate, as part of an effective adaptive management approach.

11.1 What

Adaptive management regards planning and implementing management actions, monitoring and evaluating outcomes and systematically adapting those actions according to what is learned. The process should be adjusted to the realities, issues and circumstances of the projects or plans under review without compromising the integrity of the process, and be iterative, incorporating lessons learned throughout the life cycle of a project or plan. Adaptive management can only be applied when impacts are mitigable or reversible—in essence, adaptive management actions serve as "guard rails" to avert significant adverse impact where existing management measures have proved to be ineffective. It is important to realize that adaptive management differs from "managing adaptively" which is about learning and adapting simply because of actual experiences. Adaptive management is a purposeful and planned type of learning by creating feedback loops in order to take adjustive, remedial action.

11.2 Why

IA follow-up monitoring and management needs to be flexible to achieve the agreed environmental outcomes. Contingency plans can be helpful here, which should ideally be part of the IA follow-up program prepared for the approval decision of the plan or project in order to give stakeholders early insight in the adaptive management approach. Follow-up objectives should be flexible in response to emerging needs (including uncertainty and unexpected impacts), especially important in relation to long-life projects. In addition, unexpected consequences should be revealed and addressed, as part of an effective adaptive management approach.

11.3 How

Adaptive management should be written into development proposals and the related IA follow-up programs. Adaptive management provisions should relate to the objectives, thresholds and performance criteria established for IA follow-up, or where there are known information gaps (uncertainty surrounding likely success of proposed mitigation

measures). Ongoing evaluation of follow-up results will allow for changes to be made in the management of impacts and in engagement processes as when necessary. Inclusion of contingency funding (with funding reserved for unforeseen events) may be important to ensure adaptive management happens in an effective or timely manner. Capacity building amongst proponents, regulators and stakeholders will enable adaptive management and can also reduce duplication of effort. The follow-up strategy must also include measures to monitor the implementation and effectiveness of mitigation measures (including those arising from adaptive management actions) and how this will be communicated to the stakeholders.

11.4 Who

The responsibilities for specific activities (e.g., what has to happen, when, and who has to do it) and for managing the overall program must be considered from the start of the process and at the latest be established in the IA follow-up program (i.e., when the approval decision is taken). This will naturally lead on to identifying who is to be responsible for resourcing/funding the follow-up program (including adaptive management) and outlining the principles that should govern the long-term implementation and management of the follow-up. There is need for oversight of adaptive measures and communication of these to stakeholders.

11.5 When

Throughout the life cycle of the development and where relevant continuing into the future. Some follow-up activities and reporting will continue over an extended period of time, including decommissioning, rehabilitation/restoration and post-closure.

11.6 Tips

- Include measures and capacity to enable unanticipated impacts to be noticed and addressed (where these are significant enough to warrant a management response).
- Prepare an adaptive management plan in advance so that a pre-determined response (from the adaptive management plan) gets enacted if a relevant threshold is exceeded.
- Include a clear explanation or diagram of the adaptive management cycle in IA follow-up programs showing the feedback loops, responsibilities, decision-making moments, and follow-up reporting.
- Discuss any limits of adaptive management with stakeholders in the planning phase, including consideration of potential economic effects of adaptive management measures (e.g., shutting down wind power plants to avoid bird collisions can render projects to become economically unfeasible).
- Ensure that adaptive management is not used to justify poorly designed mitigation or to allow development to proceed without appropriate information having first been obtained (e.g., baseline monitoring).

Principle 12: Be flexible according to emerging needs

Governance arrangements for IA follow-up, and the IA follow-up program itself, should be adjusted as necessary to emerging needs (e.g., arising from environmental changes, evolving needs of stakeholders, or changes in the regulatory framework).

12.1 What

In the face of emerging needs, a flexible approach to adaptive management and mitigations measures should be included in the IA follow-up program to adjust to changing contexts (i.e., mostly things occurring outside the development itself).

12.2 Why

Awareness of context is necessary in IA follow-up including environmental change, the evolving needs of stakeholders or changes in the regulatory framework. Uncertainty, unexpected impacts and changing contexts may affect the development. Uncertainty underpins all IA exercises, reflecting the dynamic nature of biophysical, social, cultural, economic and political settings. Thus, follow-up programs must be planned and managed to allow for this.

12.3 How

Periodic review and alteration of governance arrangements for follow-up should be built into the program. Undertake regular evaluations of risks and impact levels/types, including issues or events outside of the development itself and whether there have been any significant changes that warrant amendment to an IA follow-up program. Once a follow-up study has determined that a particular expected (adverse) effect will not result from the development (note that it must be determined that the adverse effect will not result, not merely that it is not being detected), it is legitimate to stop studying that effect. Conversely, when an unforeseen event is discovered, more study may well be warranted and new requirements for follow-up may be needed. Involving stakeholders (especially local communities and Indigenous Peoples) as much as possible builds connections that can help focus on particular matters of concern, while providing information to understand the environment, the development, and any follow-up adjustments that may be needed.

12.4 Who

Those responsible for the governance of the follow-up program—e.g., regulators and proponents. In some circumstances, community stakeholders may also have governance responsibilities.

12.5 When

Flexibility and the ability to change needs to happen throughout the life cycle of the development.

12.6 Tips

- Ensure that the governance framework for IA follow-up encompasses how to respond to emergencies, including major project failures and disasters.
- Build flexibility into project planning and operations and in follow-up activities themselves (as far as is practicable) so that changes in the project itself are possible if warranted. External peer review during planning and operations can support this.
- Create awareness of the context to enable flexibility in IA follow-up, which regards environmental change, evolving needs of stakeholders, or changes in the regulatory framework.
- When unexpected problems arise, take the time to think through consequences (e.g., avoid "knee-jerk reactions"); this might require use of scenarios to model a variety of possible future situations.
- Where an indicator fails to capture the required information during one of the implementation phases or where data are not available, revise the indicator to make it more meaningful.

Principle 13: Inform and be informed by follow-up for other relevant activities at different levels of decision making

IA follow-up should facilitate the transfer of information between different levels of IA application – tiering the various strategic and operational planning stages of policies, plans, programs, and projects.

13.1 What

IA follow-up is not just relevant to an individual development itself but can be a vehicle for IA tiering. It involves the transfer of learning from one IA follow-up program to the IA or IA follow-up program for a subsequent plan or project.

13.2 Why

Ensuring that learning is maximized for all applications of IA, not just for a specific development.

13.3 How

Learning from IA follow-up programs needs to be captured, communicated, and interpreted with regard to broader applications and adoption by others. Specific channels of communication may need to be established between organizations involved in all tiers of planning. This may warrant creation of a central accessible repository of IA follow-up capacity building and learning. Internal learning and mechanisms to support institutional memory are important to convey key messages and learning through (large) organizations involved in IA follow-up.

13.4 Who

The IA regulator will likely take the lead on archiving and transmitting IA follow-up learning. Other stakeholders may contribute vital content as well as make use of it.

13.5 When

Transfer of IA follow-up learning is likely to be periodic rather than continuous. It is associated with the communication element of IA follow-up, more specifically associated with IA follow-up reporting by proponents and regulators alike.

13.6 Tips

- Create an internal or, ideally, public information system with geo-referenced data with follow-up inputs and outputs (an "institutional memory") so that information can be easily exchanged and shared across plans and projects within a given jurisdiction.
- Refer to previous plan/program monitoring frameworks and data during ongoing planning and subsequent projects to provide a more robust and up-to-date baseline for future SEAs and EIAs.
- Ensure any contractual requirements (e.g., for development design, construction, or provision of services) convey key messages regarding IA follow-up.
- Make information from IA monitoring and follow-up accessible to relevant SEA agencies (i.e., to facilitate links from project IA monitoring to SEA monitoring and follow-up) – where there are different responsible governmental entities, ensure adequate information exchange between them; if the same agency, ensure that the staff or divisions for SEA and EIA "speak" to each other and share information.
- In sectors where plans or programs are periodically reviewed (e.g., land-use planning), ensure that any follow-up measures that could not be achieved during the previous planning period are brought forward (or at least considered) in the next follow-up strategy.

Principle 14: Address cumulative effects

IA follow-up activity should account for the environmental impacts from all stressors in a regional environment, not solely those of the project or plan under evaluation.

14.1 What

Just as good IAs will address relevant cumulative effects as part of their assessment process, follow-up activities should be designed to give consideration to monitoring, evaluating, managing, communicating, and governing for the cumulative consequences of development. This is not just a matter of considering the development impacts in relation to the additive effects of multiple development activities but should also be oriented toward outcomes associated with all stressors in a region acting cumulatively.

14.2 Why

Programs need to be capable of capturing impacts and outcomes that might be insignificant at the scale of individual development, but which become significant on a regional scale in a cumulative context.

14.3 How

Cooperation and consistency are needed between IA follow-up programs carried out for individual developments in a region, otherwise cumulative impacts may not be detected or understood. From a proponent point of view, there should be a way to differentiate the proportional contribution of their project or plan to the overall environmental impacts observed in the area. To this end, proponents should monitor their own impacts in ways that will ensure the combined monitoring programs of all contributing developments will provide the cumulative impact information to the appropriate regulator. Ideally, information generated within an individual project or plan follow-up would feed into a wider process, with other parties collating info across project and the region. Ensure that the collaborative devised monitoring indicators include measures for examining and addressing cumulative and synergistic effects, particularly at plan/program level. Update any previously created database with monitoring data, so that information can be exchanged across plans/programs, from plans to projects and from projects to plans in order to enhance the evidence base for cumulative effects assessment. Getting different proponents to work together is very important, but might be difficult in practice, with a particularly important role for regulators here to facilitate this. It is important that monitoring for enforcement of cumulative effects is provided for.

14.4 Who

IA regulators will usually be in a better position to evaluate cumulative effects. While individual proponents likely have limited capacity to fully address cumulative impacts, they should be encouraged to cooperate with other proponents and with regulators

in a region to address them. Communities and/or Indigenous Peoples may also play an important role in awareness and understanding of cumulative impacts.

14.5 When

Cumulative impact consideration should be an intrinsic part of IA follow-up programs and considered throughout the life cycle.

14.6 Tips

- Consider cumulative effects in the design of follow-up programs; it may be enough to monitor just a few parameters to effectively account for cumulative impacts.
- Establish a systematic and standardized framework of cumulative and trade-off effects assessment that is implemented by individual developers in collaboration with government authorities and/or institutions at the local, regional, national, and global scales.
- Address/map impacts (e.g., using GIS) on a regional basis (i.e., beyond just the direct and indirect impacts of a project on a valued component) so that the cumulative impacts relationship with other development (projects, plans and activities not subject to IA) can be clearly understood.
- Promote and facilitate learning about cumulative effects between the proponents and regulators of multiple developments in a region (i.e., without access to the findings of other monitoring programs, it is impossible to learn, or begin to explore the cumulative effects within a region).
- Adopt a place-based approach to conceptualizing and spatializing Indigenous Peoples' region(s) as a key part of accounting for cumulative effects.

Principle 15: Consider the overall effects of the project or plan

IA follow-up should provide a holistic perspective of the project or plan outcomes, taking into account how each of the individual effects of a project or plan interact with each other to contribute to sustainable development.

15.1 What

Consideration needs to be given to the collective impacts (sometimes also referred to as integrated or overall impacts) of a development taken together in IA follow-up programs. This is follow-up pertaining to "holistic impact assessment" which seeks to understand the connections and interactions between impacts, and the overall impact of a development on the environment.

15.2 Why

Apparently acceptable individual impacts of a plan or project do not guarantee that overall performance outcomes of that plan or project when impacts are considered collectively will not be significant. Development legitimacy is important for proponents and regulators alike, being a key part of social license to operate.

15.3 How

Stakeholders need to adopt an integrated perspective of all impacts of the project or plan taking into account how the various impacts interrelate with each other and the context. While such evaluations intrinsically imply specific, contextual interpretations and cannot provide undisputed biophysical or socioeconomic "realities," they can, when underpinned by meaningful stakeholder engagement, provide a legitimate perception of overall effects.

There is value in examining individual impacts during follow-up—e.g., typically using disciplinary experts. However, maintaining individual impacts within agreed/required thresholds does not mean there would be no concerns. The interactions between impacts and the accumulation and potential distributional burden of a set of impacts mean that the ongoing management of the impacts of a project or plan must still be based on an overall, integrated assessment of those impacts. Thus, there needs to a moment when the collective impacts are considered, and this should involve all stakeholders (e.g., including the community). Considering the overall effects of a development might entail a mixed scanning approach—zooming in and zooming out in regards to focus on individual impacts versus interactions between multiple impacts and an overall evaluation of the performance of development.

Currently there are no well-established procedures for performing collective or holistic impact assessment evaluations. Each development will be unique in this regard and it may not be feasible to establish clear performance criteria. A subjective approach involving deliberation by stakeholders will likely be

necessary. Developing a systems diagram to show the connections and interactions among the individual impacts of a development may provide a useful basis for understanding and communicating collective impacts. The basis for a good integrated approach should be established within the IA methodology, so this can form the basis for analysis and adaptive management for later follow-up activities. Thus, IA follow-up should build upon the integrative fundament laid down in the IA stage. It should be systems based, to ensure interactions, cross-sectoral impacts, cumulative impacts, and distributional issues are addressed.

Achieving a holistic perspective requires periodic reviews (i.e., at defined intervals) of overall development outcomes, for instance on reaching each 5- or 10-year anniversary from commencement of a project or plan. Such an approach appears likely to encounter significant opposition from project operators, and possibly from governments reluctant to allocate the required funding to regulatory agencies to oversee and respond to such reviews. Such opposition may be mitigated by linking periodic review to existing regulatory requirements—e.g., periodic update of closure plans that are now required in many jurisdictions. Environmental agreements and Indigenous Peoples – industry agreements do provide for periodic review which are holistic, but their focus is on the overall operation of the agreement rather than the outcomes of the project concerned.

15.4 Who

All stakeholders will play a role in understanding the collective impacts of development. The involvement of independent experts for interpreting the complex interactions could be useful. Indigenous Peoples and other stakeholders from local and traditional communities are particularly helpful at holistically detecting systemic changes arising from the collective impacts of development.

15.5 When

It is desirable to take a holistic approach to IA and to the design and implementation of follow-up programs throughout the project life cycle. However, particular emphasis should occur when evaluating IA follow-up monitoring and deciding on management action. Periodic reviews of development activity and their IA follow-up programs (e.g., on a 5- or 10-year basis following implementation) provide an important opportunity to take a holistic approach to understanding performance.

15.6 Tips

- Monitor achievement of IA follow-up objectives and collective impacts (i.e., the overall outcomes of development, not just the results of individual mitigation efforts).
- Utilize participative workshops (annual or semi-annual) that are moderated and audited by external parties to evaluate collective impacts and overall effects of development.
- Showcase approaches that help to address the complexity of interactions (which often make it difficult to identify the environmental changes resulting from a given plan or project).
- Use methods (e.g., ceremony, experience, and art), that Indigenous Peoples understand to organize and communicate information for a holistic understanding of an environmental setting and impacts, in addition to scientific and technical means.
- Trial and document methods that take an integrated approach to understanding the impacts of development; examples include: (i) technological approaches using GIS help to assimilate multiple spatial impacts; (ii) matrices and scoring systems that rate impacts/risks for different scenarios (e.g., high/medium/low), scoring them individually and then combining them together to arrive at an assimilated value; and (iii) cost-benefit analysis to measure actual costs vs benefits during follow-up (relative to a pre-development baseline) so as to derive a quantitative measure for collective impacts.

Appendix A

International Association for Impact Assessment

Special Publication Series No. 6
May 2022

International Best Practice Principles

IA Follow-up

PURPOSE
These international best practice principles for impact assessment (IA) follow-up are intended to guide development and capacity building amongst practitioners for improving IA outcomes, thereby enhancing sustainable development.

BACKGROUND
These principles are an update of the 2007 IAIA IA Follow-up principles document. They were developed through literature review and presented and discussed in collaborative sessions at IAIA21 and IAIA22.

HOW TO CITE THIS PUBLICATION
Arts, J. and Morrison-Saunders, A. (2022) IA Follow-up. Special Publication Series No. 6. Fargo, USA: International Association for Impact Assessment.

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Definition

Impact assessment follow-up is defined as:

Understanding the outcomes of projects or plans subject to impact assessment.

Objective

The primary objective of IA follow-up is to determine and learn about the outcomes of impact assessment of projects or plans in order to inform ongoing management of that development. Secondary objectives (beyond the scope of these principles) are: to learn about IA performance, and to enhance efficacy and legitimacy of decision-making and impact assessment for projects or plans, including future IA applications for other development.

What is IA follow-up?

Follow-up is a fundamental component of IA and essential if outcomes of a plan or project subject to IA are to be known. Thus, a commitment to follow-up should be present for every IA whether this is through inclusion in legislative provisions for IA or within individual approval decisions. This includes appropriate resourcing for all IA follow-up undertakings throughout the life-cycle of development. IA follow-up comprises five key elements:

- **Monitoring** – collection of activity and environmental data relevant to project or plan performance determination.
- **Evaluation** – of monitoring data in light of performance standards, objectives, predictions or expectations.
- **Management** – making decisions and taking appropriate actions in response to issues arising from monitoring and evaluation activities.
- **Engagement and communication** – with stakeholders on all aspects of IA follow-up.
- **Governance** – processes and arrangements enabling the implementation of IA follow-up activities.

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IAIA/PUBS/SPS_22 IA Follow up.indd (05.22)

Impact assessment follow-up principles

IA follow-up should be guided by these 15 best practice principles.

1. **State the objective of each impact assessment follow-up activity and the overall program.**

   IA follow-up should be objectives-led and goal oriented.

2. **Be tailored to context.**

   IA follow-up should be 'fit-for-purpose' recognising that individual applications of IA follow-up will vary according to the specific contextual factors at play (e.g., project or plan type or locality, significance of impacts or issues arising, or institutional setting).

3. **Commence early in the impact assessment process.**

   Timing is vital in IA follow-up and developing a follow-up program should start early in the IA process (e.g., during screening and scoping) and thereafter be acted upon as appropriate.

4. **Be carried out throughout the project or plan life-cycle.**

   IA follow-up provisions should be established by the time that projects or plans are approved and implementation of follow-up actions should commence and continue through the construction, operation and, where relevant, the decommissioning phases of development on an iterative and ongoing basis.

5. **Be transparent.**

   All IA follow-up arrangements (e.g., design, processes and governance) and implementation actions and their outcomes (monitoring, evaluation, management and engagement with stakeholders) should be publicly disclosed. All stakeholders have a right to feedback on the IA process.

6. **Be accessible to all impact assessment stakeholders.**

   IA follow-up information should be easy to access and to understand. Archiving, retrieval and disclosure of follow-up information requires careful attention. As a minimum, stakeholders should be informed about IA follow-up activities and outcomes, and to be provided with opportunities to give input or feedback; but active engagement in follow-up program design and implementation is desirable.

7. **Provide clear accountability for impact assessment follow-up responsibilities.**

   Ensure that there is clear accountability established in the governance arrangements for IA follow-up. Enabling a two-way flow of communication between stakeholders who are affected and those responsible for IA follow-up and/or the development is important.

8. **Provide clear, pre-defined and well-justified performance criteria.**

   Follow-up actions should produce useful information and outcomes which can be easily measured, and unambiguously appraised against clear and pre-defined performance criteria. The performance criteria should be rigorous and reflect best practice (e.g., through adopting well-defined methodologies or approaches to monitoring, evaluation, management, communication and engagement).

9. **Specify enforcement provisions.**

   In addition to promoting 'good behaviour', it is also important to identify the consequences for non-compliance within IA follow-up provisions.

10. **Promote continuous learning from experience to improve future practice.**

    IA follow-up should enable learning from experience through active feedback. It should not be static. Such learning may inform the management of other similar projects or plans regardless of whether they are operated by the same or other proponents, to improve IA practice.

11. **Facilitate adaptive management.**

    Mitigation provisions for a project or plan should be adjustable as needed. Learning derived from IA follow-up should inform ongoing adaptive management of the project or plan as necessary, in order to achieve its objectives. IA follow-up would ideally also enable unexpected consequences to be revealed and addressed as appropriate, as part of an effective adaptive management approach.

12. **Be flexible according to emerging needs.**

    Governance arrangements for IA follow-up, and the IA follow-up program itself, should be adjusted as necessary to emerging needs (e.g., arising from environmental changes, evolving needs of stakeholders, or changes in the regulatory framework).

13. **Inform and be informed by follow-up for other relevant activities at different levels of decision-making.**

    IA follow-up should facilitate the transfer of information between different levels of IA application – tiering the various strategic and operational planning stages of policies, plans, programs and projects.

14. **Address cumulative effects.**

    IA follow-up activity should account for the environmental impacts from all stressors in a regional environment, not solely those of the project or plan under evaluation.

15. **Consider the overall effects of the project or plan.**

    IA follow-up should provide a holistic perspective of the project or plan outcomes, taking into account how each of the individual effects of a project or plan interact with each other to contribute to sustainable development.

2 Teaching Impact Assessment: International best practice principles

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How to cite this publication

Morrison-Saunders, A., Arts, J. et al (2024). *Guidance for Implementing the Impact Assessment Follow-up International Best Practice Principles*. Reference and Guidance Documents. International Association for Impact Assessment, Fargo (USA).

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List of contents

About the International Association for Impact Assessment

IAIA is the leading global network on best practice in the use of impact assessment for informed decision making regarding policies, programs, plans, and projects.
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