Effective follow-up and monitoring in environmental impact assessment (EIA) is grounded in taking a forward looking and holistic approach to project development. Alistair Billington and Caroline Burn explain how data is the common thread that runs through and links all the stages of a project’s life cycle, and proper data management can provide better outcomes in construction and operation.

**The challenge**

ERM has been working with its clients to take a more holistic view of EIA through the medium of data. Our approach is grounded in the principle that data is very precious, and often challenging, time consuming and expensive to collect. Data should therefore be a commodity and an asset to be valued and looked after as we move through the EIA process. This we believe will lead to more effective follow-up and monitoring in the later project stages.

Many projects are developed through a stage gate process, and the EIA is usually carried out in the earlier stages of concept and feasibility, to support obtaining a consent prior to construction. During project development personnel can come and go, as you move from one stage gate to another. For example, a team may be given the responsibility to carry out the option/route selection and for establishing the concept for a project. Another group of people then take over to obtain permits and consents, but move on to something else prior to construction. With each of these changes of personnel there is the intellectual property loss that goes with them. Development of the project ends up being carried out in silos.

Those tasked with option selection aren’t necessarily thinking about effective follow-up and monitoring during construction and operation.

Our belief, and what we’re working with a lot of clients about right now, is to make sure that the management of the data transcends all of these boundaries, irrespective of whether people come and go. ERM’s view is that every step of project development and EIA should be supporting the next, so that by the time an asset is decommissioned, there is clear visibility and a line of sight of all the data that has been collected throughout the lifetime of the project.

The challenge is that frequently the data collected through surveys, secondary sources etc., is then reported and published in ‘static’ forms, such as pdf maps within an Environmental Statement. In this form data are difficult to extract and cannot easily be used again. The consultants preparing the Environmental Statement may not be involved in the next stages of the project’s lifecycle (detailed planning approvals, construction, operation and decommissioning), and may not have participated in the project feasibility or start-up stages. Data that were carefully collected over many hours and at great expense tend to become frozen into a particular project phase and then lost as individuals transition in and out the project.

Additionally, it is often the case that very little is done to standardise data across a project, or to how the data may be eventually presented or used over the very long term.
Project team members collect information in different ways and through different mediums, with various software systems and tools that are not always compatible. This incompatibility, again, reduces the accessibility of data to all and increases the time needed for data processing.

**The way forward**

Several tools can be established from the very first stages of project set-up to enable transfer of data through the project lifecycle. When the EIA is undertaken, data can be fed into an existing central repository and shared with all members of a project team and new team members going forward. The central repository can be linked to a web viewer such as ArcGIS, Nexis and SharePoint to present data in a form that can be queried and manipulated, or easily extracted and displayed in other forms. Data no longer need to be physically handed over as a project moves into new phases; instead, the access rights of an already established system can be supplied. This helps to maintain the assurance and integrity of the data and removes any errors that might arise in translation through extracting information from hard copies.

Web viewers and story maps are also helpful tools for stakeholder engagement. A single project web viewer can be set up with differing levels of access for the project team members, consultees, the public, etc. In this way all interested parties have access to a single source of truth. Story maps can also be created drawing information from the web viewer to clearly illustrate the impacts from different phases of a project. Such tools are fundamental in leading us towards more proportionate assessment and reporting.

So instead of treating follow up and monitoring like the distant step-child that is someone else's problem, use the early stages of project development to establish indicators that genuinely show progress with managing key effects. This will enable monitoring to be specific and serve a purpose to deliver environmental and social protection and enhancements and demonstrate compliance. The Global Reporting Initiative has excellent sector-specific guidance to support the development of indicators that will help get the reporting right i.e. on what? How often?, and to which audience?

These indicators, supported by accessible project data, can provide clear instructions to EPC contractors against which to bid for the detailed design and build phases of a project. Clear identification of the responsibilities required will lead to less 'risk' being built into the pricing. 5-10% on the capital cost at this stage is a much bigger sum of money than the up-front cost of carrying out effective data management from the outset.

Additionally, carrying out effective follow-up and monitoring, will help to retain stakeholder confidence, by demonstrating responsibility and responsiveness to the management of the main effects. An effective data platform will also provide the proof of delivery against stated claims, and will provide a mechanism to continue to canvas and respond to changing stakeholder expectations.

Effective data management should transcend project boundaries and challenges, irrespective of changes in the project team, and strive to ensure that data remain accessible and live.

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