Integrating IFC's Performance Standard 6 into impact assessment

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Abstract

The International Finance Corporations (IFC) Performance Standard 6 (PS6) on *Biodiversity Conservation and Sustainable Management of Living Natural Resources* provides a risk-based approach to biodiversity impact management. Integration of PS6 elements within ESIA practice provides an effective framework for managing biodiversity risks by aiding in early identification of the most important biodiversity features, reduction of impacts to them through iterative application of the mitigation hierarchy, and reducing ESIA costs by focusing baseline, impact analysis and assessment, and management planning effort on the highest biodiversity risks. The PS6 approach is more robust than traditional ESIA, going beyond qualitative assessment and for priority features requiring semi-quantified accounting of residual impacts and feasibility analysis for net gain delivery. This process is likely to require a higher standard of proof on the proponent to ensure that mitigation responses, including offsets, are appropriate and likely to succeed. Impact accounting is also more likely to meet stakeholder concerns by providing a more transparent and definitive assessment on whether the biodiversity impacts of proposed projects are acceptable, or whether they should be further redesigned or rejected.

Introduction

Inadequate consideration for biodiversity risks in industrial development projects continues to contribute to avoidable global habitat loss and threaten species survival (Darbi *et al.* 2009; TEEB 2010; Quintero & Mathur 2011). In order to realise a more sustainable basis for development, impact assessments need to be scoped and structured to enable a rigorous application of the mitigation hierarchy, focused on reducing impacts to as low as is practicable through avoidance, minimisation and restoration measures (Clare *et al.* 2011; Brownlie *et al.* 2012; Gardner *et al.* 2013).

The consequences to projects that inadequately account for social and environmental ('non-technical') risks are real: it has been estimated that the biggest unplanned costs to mining projects are the result of social conflict over environmental resources (Franks *et al.* 2014). Integrating biodiversity risk management into business decision-making from the outset of design and impact assessment therefore makes good business sense and reduces operational costs downstream. Both governments (Rainey *et al.* 2014; ten Kate & Crowe 2014) and businesses (TBC 2014) are adopting biodiversity policies that aim to more effectively address industry impacts and result in better biodiversity outcomes. In order to manage their own investment risks, international finance institutions in both the public and private sectors are also requiring clients to meet increasingly stringent environmental standards in order to be eligible for investment funding. The IFC has led the way with the release of revised versions of its eight Performance Standards on environmental and social sustainability in 2012, including Performance Standard 6 (IFC 2012a). These standards are applicable to IFC investments ($22.4 billion into 599 projects in developing countries in 2014 (IFC 2016)) as well as to those of 83 other lending institutions through their adoption of the Equator Principles, which together cover over

70% of international private sector project finance in emerging markets, except in China and India (Equator Principles 2016).

PS6 requires upfront identification of priority biodiversity features (based on the vulnerability and/or irreplaceability of species and ecosystems) at greatest risk from developments, and a rigorous application of the Mitigation Hierarchy (CSBI & TBC 2015). Where there are measurable adverse impacts for Critical Habitat qualifying features, or significant alteration of integrity or viability in Natural Habitat, PS6 respectively requires either a net gain or net balance for these features and habitats. IFC PS6 thereby provides an effective framework for improving overall biodiversity outcomes by focusing on the key issues, reducing unnecessary information and analysis often associated with contemporary ESIAs.

An important element not usually present in ESIAs historically, is a semi-quantified estimation of significant residual impacts to priority biodiversity features (a combination of data and expert opinion to arrive at parameter values such as population size, habitat extent, or rates of feature loss), complemented by an assessment of whether a credible rationale exists for compensation to achieve a net balance or gain. Increasingly, national or corporate policies require design and implementation of offsets to compensate for residual impacts to priority biodiversity. It is problematic to develop these post-hoc to an ESIA not scoped to provide quantitative information on such impacts. Therefore, integrating the IFC PS6 approach into ESIA practice not only helps reduce impacts to sensitive biodiversity; it can also reduce ESIA costs by focusing baseline, analysis and management planning effort on the highest biodiversity risks, thereby often speeding permitting. This risk-based approach enables the ESIA to provide a more definitive and transparent assessment on whether impacts of proposed projects are acceptable according to applicable policy frameworks and development priorities. A good risk-based application of the mitigation hierarchy including iterative redesign should reduce the chance of the project being rejected, or major redesign requested by funders or permitters.

Here we provide an approach for strengthening ESIA practice as a tool for biodiversity risk management through integration of PS6 requirements. This process can be broken down into five steps:

(i) screening for biodiversity risk and alternatives analysis;
(ii) determination of the biodiversity significance of the area (baseline & receptor sensitivity);
(iii) qualitative impact assessment and base-case mitigation;
(iv) semi-quantitative assessment of residual impacts and additional mitigation measures;
(v) integration of mitigation into Environmental and Social Monitoring Systems (ESMS);

These steps follow a logical sequence and in practice are also iterative as information becomes available.

We explore how integration of PS6 into the ESIA can improve biodiversity outcomes while simultaneously helping to reduce costs and time delays, delivering increased efficiencies to financiers, governments and projects alike. While we recognise ecosystem service assessment is an integral part of PS6 and ESIA, we focus on integration of biodiversity into the ESIA. For an assessment of ecosystem service integration into ESIA, see Rosa & Sánchez (2015).

Screening for biodiversity risks and alternatives analysis

Biodiversity screening provides an initial assessment of potential project risks related to biodiversity features within a broad area that encompasses potential project siting and their direct and indirect areas of influence. In order to help scope the ESIA, an emphasis should be placed on risk screening prior to collection of baseline data in the field. Screening allows early alternatives analysis for the avoidance of impacts in advance of design freezes where biodiversity risks are predicted to be unacceptably high or if offsets are unlikely to be feasible (Clare *et al.* 2011; BBOP 2012b; Brownlie *et al.* 2012; Pilgrim *et al.* 2013). Risk screening utilises existing project ESIAs and regional studies, combined with global and regional databases to undertake an initial assessment of biodiversity risks and mitigation opportunities, including biodiversity offsets. Specialist consultation is needed to interpret information, with the aim of identifying biodiversity risks that warrant particular attention throughout the ESIA process.

Although the level of effort involved in a PS6-aligned screening exercise can be higher than typically applied at this early stage, it is likely to save costs by enabling avoidance design changes, and prioritising subsequent baseline survey effort towards better understanding risks.

Determination of the biodiversity significance of the area

Biodiversity feature significance (or 'receptor sensitivity') assessment should begin during ESIA scoping and takes into account global (and national if they exist) priority setting systems and is based upon the presence and/or quantity of priority biodiversity features (e.g. rare or threatened species and habitats) within an ecologically and managerially defined area of analysis encompassing the project's broad area of influence.

Determination of biodiversity significance is based upon quantitative and qualitative thresholds, which in turn are largely based on globally accepted precedents such as IUCN Red List criteria and Key Biodiversity Area (KBA) thresholds (Eken *et al.* 2004; IUCN 2015). Review of scientific and grey literature, as well as consultation with stakeholders and regional experts is required to determine whether thresholds are met within the project area of analysis. This work should be supported by qualified specialists. After scoping, baseline data collection, often requiring two or more iterations, is needed to fully evaluate the presence, distribution and abundance of species and ecosystems to assess whether biodiversity significance thresholds under PS6 are met.

A common issue with baseline surveys is that they act as descriptive inventories rather than serving to inform the project of its level of risk associated to biodiversity (Gullison *et al.* 2015). PS6 provides a more streamlined approach by focusing sampling effort on a select number of biodiversity features that are at greatest risk from the project.

Determination of the area's biodiversity significance as part of scoping is fundamental in understanding the project's operational costs and risks, including the need for expensive and unpredictable remediation and compensation measures. Thorough screening therefore creates a strong incentive to revisit design options and undertake further avoidance measures and minimise impacts to as low as reasonably practical. Our experience is that where biodiversity considerations are integrated into early project design, relatively simple and cost-effective alterations can lead to significant reductions in biodiversity impacts and potential remediation costs.

Qualitative impact assessment and base-case mitigation

A qualitative analysis and assessment initially establishes which types of project impacts are likely and severe enough to threaten which priority biodiversity features. Inadequate consideration for indirect and cumulative impacts in ESIAs is a common problem that can lead to considerable uncharacterised impacts and risks to the project (Slootweg *et al.* 2006; Brownlie *et al.* 2012). PS6 helps to address this issue by looking well beyond the direct project footprint to consider indirect and cumulative changes that may occur to biodiversity at various spatial and temporal scales within the project's area of influence.

Where the project is impacting upon priority biodiversity features, PS6 requires projects to 'fully exercise the mitigation hierarchy', including application of offsets where feasible (IFC 2012b). As is often stated, offsets inherently carry uncertainties and risks and should only be used as a last resort (BBOP 2012b; Gardner *et al.* 2013; Pilgrim *et al.* 2013), and a credible semi-quantitative assurance of their feasibility needs to be included within ESIA mitigation planning in order to serve regulatory approval and investment decisions.

Semi-quantitative assessment of residual impacts and additional mitigation measures;

For impacts on priority biodiversity features assessed during the qualitative impact assessment phases important, PS6 requires quantification of residual impacts (IFC 2012b). Quantification is a more rigorous approach than traditional qualitative ESIA and is likely to require a higher standard of proof on the client to ensure that mitigation responses, including offsets, are appropriate and likely to succeed. Quantification of impacts and mitigation measures is also more transparent and thus more likely to be accepted by stakeholders, improving the reputation of the business (BBOP 2012a; Brownlie *et al.* 2012; Gardner *et al.* 2013).

Integration of mitigation into ESMS

A project's Environmental and Social Management Systems (ESMS) provides the framework for implementing all biodiversity management actions aligned with PS6 requirements; in addition to a detailed register of all minimisation actions for general ecological impacts, key elements for priority biodiversity features suitable for inclusion at the ESIA submission stage include:

(1) Biodiversity Action Plan (BAP): Documents measures to mitigate impacts to priority features, including through the use of offsets. The BAP provides a framework for the project's approach to managing biodiversity risk; it is meant to provide stakeholders with a clear understanding of exactly how impacts will be addressed.

(2) Biodiversity offset strategy: Demonstrates how the project intends to implement its approach to offsets, if required, through quantification of losses and gains.

(3) Stakeholder engagement strategy: Outlines how the project will engage with stakeholders, including affected communities, Government, NGOs and industry. Positive stakeholder engagement will include timely disclosure of relevant information and a transparent process for addressing concerns throughout the project lifecycle.

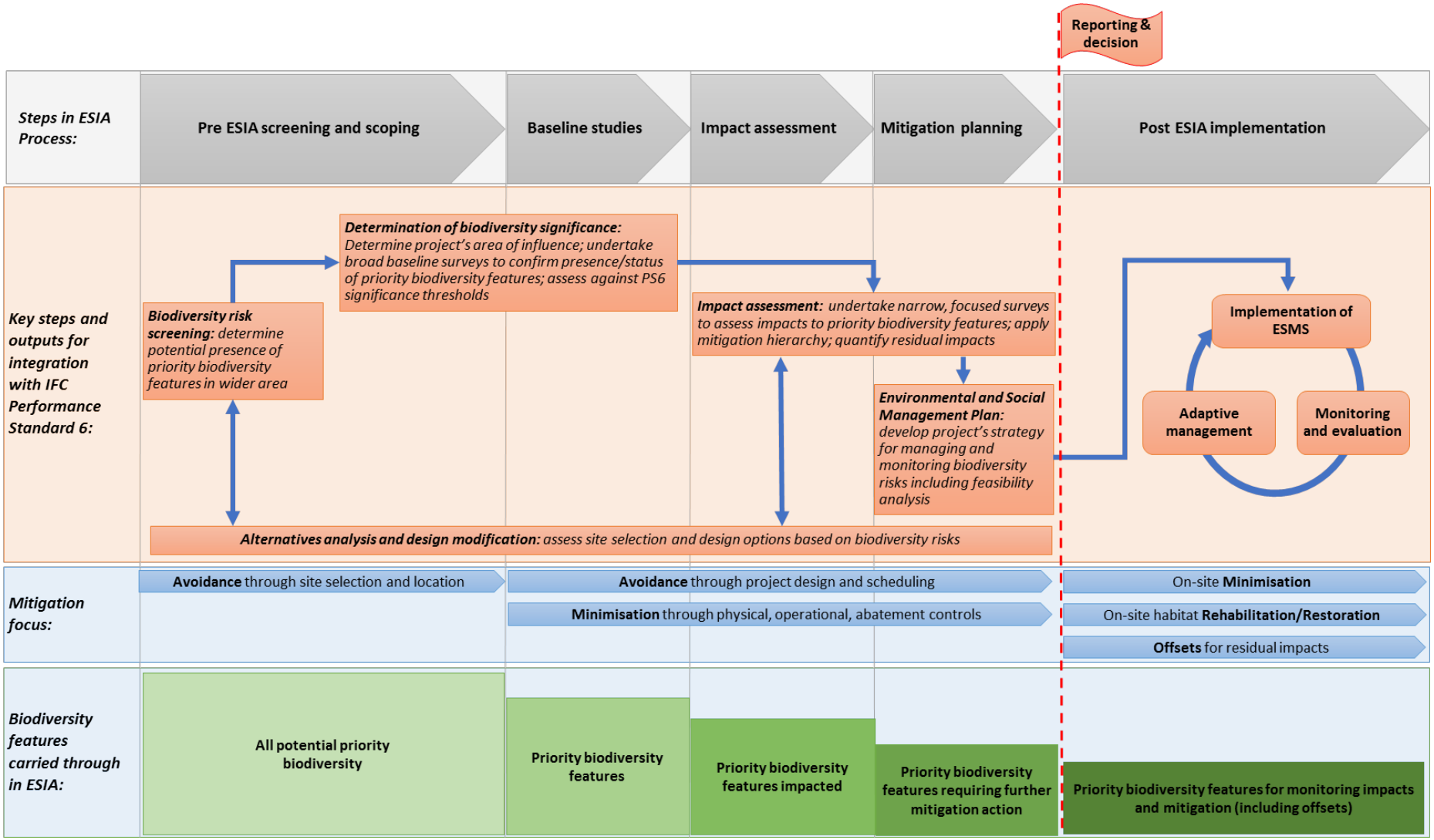
(4) Monitoring & evaluation strategy: A robust, long-term monitoring plan is needed to demonstrate progress towards delivering net balance/gains to auditors and stakeholders, based on the same indicators

used to asses residual impacts. Monitoring confirms predictions on the efficacy of mitigation measures, and provides opportunities to adjust investment, potentially reducing costs to the project.

Conclusions

In this paper we have presented a framework for integrating the IFC PS6 approach into the ESIA process and, drawing on our experience, suggested a number of ways in which this approach helps to deliver better biodiversity outcomes whilst reducing project risk, ESIA scope, permitting delays and cost. Importantly, integration of PS6 throughout the impact assessment process serves as a tool for building stakeholder acceptance for the project prior to implementation.

We hope that the approach we present here will contribute to a wider understanding of the potential for PS6 approaches to addressing the gap between commonly practised ecological impact assessments and emerging policy frameworks requiring ESIA to be a tool for delivering on commitments for halting biodiversity loss and a more sustainable basis for development.


Reporting & decision
Steps in ESIA Process:
Pre ESIA screening and scoping
Baseline studies
Impact assessment
Mitigation planning
Post ESIA implementation
Key steps and outputs for integration with IFC Performance Standard 6:
Biodiversity risk screening: determine potential presence of priority biodiversity features in wider area
Determination of biodiversity significance: Determine project's area of influence; undertake broad baseline surveys to confirm presence/status of priority biodiversity features; assess against PS6 significance thresholds
Impact assessment: undertake narrow, focused surveys to assess impacts to priority biodiversity features; apply mitigation hierarchy; quantify residual impacts
Environmental and Social Management Plan: develop project's strategy for managing and monitoring biodiversity risks including feasibility analysis
Implementation of ESMS
Adaptive management
Monitoring and evaluation
Alternatives analysis and design modification: assess site selection and design options based on biodiversity risks
Mitigation focus:
Avoidance through site selection and location
Avoidance through project design and scheduling
Minimisation through physical, operational, abatement controls
On-site Minimisation
On-site habitat Rehabilitation/Restoration
Offsets for residual impacts
Biodiversity features carried through in ESIA:
All potential priority biodiversity
Priority biodiversity features
Priority biodiversity features impacted
Priority biodiversity features requiring further mitigation action
Priority biodiversity features for monitoring impacts and mitigation (including offsets)

References

BBOP (2012a) Resource Paper : No Net Loss and Loss-Gain Calculations in Biodiversity Offsets. Business and Biodiversity Offsets Programme (BBOP), Washington, DC.

BBOP (2012b) Limits to What Can Be Offset. Business and Biodiversity Offsets Programme (BBOP), Washington, D.C.

Brownlie, S., King, N. & Treweek, J. (2012) Biodiversity tradeoffs and offsets in impact assessment and decision making: can we stop the loss? *Impact Assessment and Project Appraisal* 1–10.

Clare, S., Krogman, N., Foote, L. & Lemphers, N. (2011) Where is the avoidance in the implementation of wetland law and policy? *Wetlands Ecology and Management* 19: 165–182.

CSBI & TBC (2015) *A Cross-Sector Guide to Implementing the Mitigation Hierarchy*. Cross-Sector Biodiversity Initiative.

Darbi, M., Ohlenburg, H., Herberg, A., Wende, W., Skambracks, D. & Herbert, M. (2009) International Approaches to Compensation for Impacts on Biological Diversity. Leibniz Institute of Ecological and Regional Development and Berlin University of Technology, Dresden and Berlin.

Eken, G., Bennun, L., Brooks, T.M., Darwall, W., Fishpool, L.D.C., Foster, M., Knox, D., Langhammer, P., Matiku, P., Radford, E., Salaman, P., Sechrest, W., Smith, M.L., Spector, S. & Tordoff, A. (2004) Key biodiversity areas as site conservation targets. *Bioscience* 54: 1110–1118.

Equator Principles (2016). www.equatorprinciples.com

Franks, D.M., Davis, R., Bebbington, A.J., Ali, S.H., Kemp, D. & Scurrah, M. (2014) Conflict translates environmental and social risk into business costs. *Proc. Natl. Acad. Sci. U. S. A.*

Gardner, T.A., Von Hase, A., Brownlie, S., Ekstrom, J.M.M., Pilgrim, J.D., Savy, C.E., Stephens, R.T.T., Treweek, J., Ussher, G.T., Ward, G. & Ten Kate, K. (2013) Biodiversity Offsets and the Challenge of Achieving No Net Loss. *Conservation Biology* 27: 1254–1264.

Gullison, R.E., Hardner, J., Anstee, S. & Meyer, M. (2015) Good Practices for the Collection of Biodiversity Baseline Data. Multilateral Financing Institutions Biodiversity Working Group & Cross-Sector Biodiversity Initiative.

IFC (2012a) Performance Standards on Environmental and Social Sustainability - 2012 Version. International Finance Corporation, Washington DC, USA.

IFC (2012b) Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. International Finance Corporation, Washington DC, USA.

IFC (2016). http://www.ifc.org

IUCN (2015) The IUCN Red List of Threatened Species. Version 2015.4. www.iucnredlist.org

Pilgrim, J.D., Brownlie, S., Ekstrom, J.M.M., Gardner, T.A., von Hase, A., Kate, K. ten, Savy, C.E., Stephens, R.T.T., Temple, H.J., Treweek, J., Ussher, G.T. & Ward, G. (2013) A process for assessing the offsetability of biodiversity impacts. *Conservation Letters* 6: 376–384.

Quintero, J.D. & Mathur, A. (2011) Biodiversity Offsets and Infrastructure. *Conservation Biology* 25: 1121–1123.

Rainey, H.J., Pollard, E.H., Dutson, G., Ekstrom, J.M., Livingstone, S.R., Temple, H.J. & Pilgrim, J.D. (2014) A review of corporate goals of No Net Loss and Net Positive Impact on biodiversity. *Oryx* 1–7.

Rosa, J.C.S. & Sánchez, L.E. (2015) Is the ecosystem service concept improving impact assessment? Evidence from recent international practice. *Environmental Impact Assessment Review* 50: 134–142.

Slootweg, R., Kolhoff, A., Verheem, R. & Hoft, R. (2006) Biodiversity in EIA and SEA. Background Document to CBD Decision VIII/28: Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment.

TBC (2014) Government Policies on Biodiversity Offsets. The Biodiversity Consultancy, Cambridge, U.K.

TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB.

ten Kate, K. & Crowe, M.L.A. (2014) Biodiversity Offsets: Policy Options for Governments. IUCN, Gland, Switzerland.