ECA Symposium

Greg Woodman

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What information do we need to support EIA? How much is enough?

Simple question – complex to answer!

Surveys provide the data to support the EIA process which includes:

- Environmental planning and management (avoidance and mitigation)
- Regulator assessment of acceptability (legislated approvals mechanisms)
- Determination and quantification of environmental offsets

EIA products must be science-based, robust and address the above.
Not a quick and easy job.

EPA Guidance

- Provides EPA expectations from proponents and consultants.
- Guidance documents provide expectations of:
  - Survey report content.
  - Potential methods (data collection, analyses and presentation).

The role of the environmental consultant is to interpret the guidance and propose robust and defensible survey designs and analyses to answer the questions posed in an EIA.

The guidance is not a prescription.

Objectives of biological survey in EIA

- Characterise the receiving environment and biodiversity
- Identify, quantify and map all conservation significant features (species, habitats and communities)
- Produce accurate and defensible products (maps of features) at a scale suitable to identify significant features, identify and assess impacts and if required, calculate quantitative impacts and offset requirements.

How do we determine how much information is enough to produce the above products with a rigour that is defensible?

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Survey Types

Recent years has seen an increase in requests for “**Reconnaissance**, **Basic**, **Detailed**, **Targeted**” surveys that rely on generalised descriptions in EPA Guidance.

- Is this good enough?
- Who should be deciding on the appropriate level of investigation?
- EIA specialist / Ecologist / Joint? / Government??

Determining Scope and Scale of Surveys – the WA Experience

Risk assessment and desktop information are required to determine scope and scale of surveys.

The key questions to ask yourself when determining the most appropriate scope and scale of a biodiversity investigation are:

What is the nature of the receiving environment?

What is the nature of the proposal?

How will they interact?

Receiving Environment

The relevant aspects of the receiving environment include:

General patterns of biodiversity

- α and β diversity
- Habitats interactions
- Environmental and landscape processes

Conservation significant taxa and communities

- Conservation significant species and communities
- Habitats
- Species specific survey requirements
- Sensitive environments (GDEs)
- Keytone species and environments – Holistic view of the environment

Nature of the Impact

- Can immediately indicate whether a Detailed or Targeted survey is required.

- Important in determining indirect impacts e.g. will the proposal extract water from a shallow groundwater aquifer and potentially impact Groundwater Dependent Ecosystems?

- Investigate with the proponent (client) a full understanding of the type of operation, the total area of clearing proposed and the proposed timing of the proposal.

- Scale or area of impact is invariably the most important aspect:
  - potential severity of impacts and
  - the final study area required to address impacts at both a local and regional scale.

How to Proceed?

A case-by-case assessment is always warranted.

Receive Scope / Tender

Understand the Environment and Project

Acknowledge possible impacts in survey design

Ensure contingency to address desktop and survey findings in final surveys

Engage with the Proponent / Client

Appropriate research to inform design and timing of surveys is critical to ensuring that appropriate data is collected without the need for repeat surveys to answer regulator requests for additional information.

How can we improve?

Focus on what products are required for the EIA

Ask yourself:

- Will I have enough data to be confident that the studies will meet the objectives of the EIA?
- Would I be happy to defend the study findings if a proponent or regulator challenges the survey rigour?
- What additional government support would support the industry in answering the question – “how much is enough?”
- Can we improve EIA in WA by doing things differently?

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Concepts and opportunities to improve/simplify the process?

Regular workshops with EPA/DWER to keep consultant approaches to survey design consistent and appropriate to each bioregion?

Biodiversity inventory surveys versus habitat survey and threat-based risk assessment?

Data requirements to understand holistic impacts to the environment and supporting functions?

Should regional level biodiversity data be a government responsibility with robust peer reviewed datasets and analyses that are regularly curated and maintained?

Thank You

Greg Woodman
Senior Principal Ecologist

gwoodman@umwelt.com.au

umwelt

P 1300 793 267 E info@umwelt.com.au W umwelt.com.au
NSW | WA | ACT | QLD | VIC | SA