Limits to offsetting in New Zealand

Introduction

Biodiversity offsets are intended to compensate for significant residual effects of development projects with management actions that result in no net loss or a gain to biodiversity. Assessing limits to offsets (i.e. a project's offsetability) is an essential part of the process in offset development and this is reflected in its explicit inclusion as a BBOP Principle:

> ***BBOP Principle 2: Limits to what can be offset:*** *There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected.*

In a scenario where, as a part of a well-designed biodiversity offset, the upper limits of a particular proposal's ability to offset residual impacts are considered, a no net loss or a net gain outcome is more likely to be demonstrated. Implicit in this statement is that there are upper limits to the ability of biodiversity offsets to achieve no net loss (BBOP 2012b; Pilgrim et al. 2013) and, in situations where these are likely to be breached, an offset may not be appropriate because the risk of net biodiversity loss is unacceptable.

Some examples of unacceptable risks include:

- Some offsetting approaches allow for a reduction in the total area of a habitat to be traded for an improvement in the condition of what remains. This 'drawdown' may not be desirable or appropriate for irreplaceable or rare and vulnerable biodiversity.
- Biodiversity losses may increase more rapidly once habitats, or populations, fall below a certain minimum threshold size. This increased risk may not be accounted for in offsetting calculations.
- The time-lag between biodiversity losses and gains may place an unacceptable risk on the recovery of the species, potentially setting it back or risking further decline.
- Even for more-common habitats, some areas have naturally high values for reasons of ecological integrity, representativeness, condition, the proportion of a population existing there, the limits of a species' range, or because of a combination of factors (including those listed already).

The consequences of an offset failure may be unacceptable if it will result in a significant or irreversible impact on irreplaceable and vulnerable biodiversity.

This concept can be shown in Figure 1:

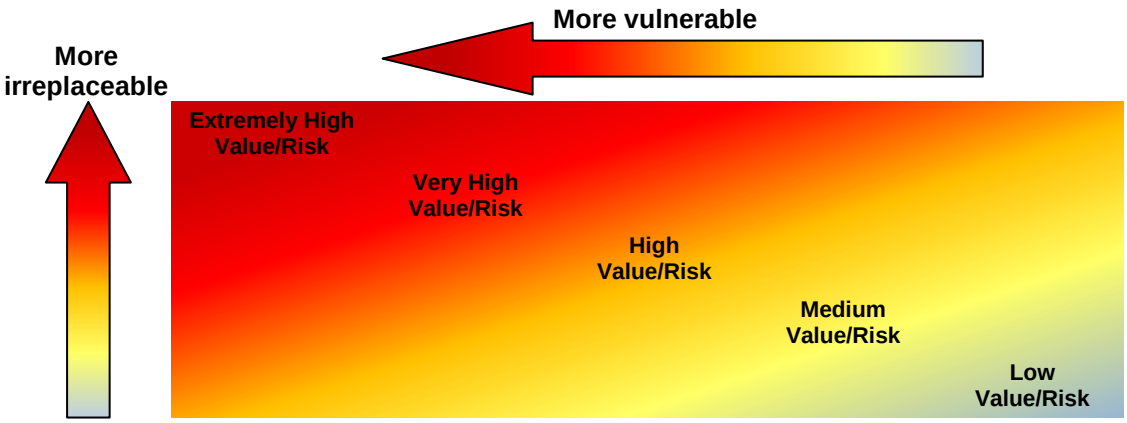

Figure 1: The value of biodiversity increases as vulnerability and irreplaceability increase; this also increases the risk that a biodiversity offset cannot be achieved, due to lack of places and small or declining populations.

The offsetability of residual effects is linked to the definition of an offset and its requirement for no net loss to be demonstrated. The concept of no net loss is a critical component to assessing the appropriateness of an offset, because offset failure results in biodiversity loss. Any predicted outcome that falls below this standard cannot thus be deemed a biodiversity offset consistent with the Guidance.

Residual impacts might not be offsetable when either the irreplaceability and/or vulnerability of the affected biodiversity is high (Fig. 1), rendering the goal of no net loss or a net gain either impossible or potentially attainable, but with an unacceptably high level of risk of failure.

Considered application of this practice can reduce the costs of developing an offset and increase the confidence of decision makers that affects to biodiversity have been adequately addressed (e.g. an offset might be more feasible and cost less if residual effects to irreplaceable values are avoided).

Assessing offsetability: a burden of proof framework

Assessing limits to offsets involves consideration of several issues relating to the nature of the affected biodiversity and constraints on the ability to manage residual effects to achieve no net loss or a net biodiversity gain. Key issues affecting offsetability include:

- Biodiversity conservation concern
- Magnitude of significant residual effects
- Offset opportunity and offset feasibility

Pilgrim et al. (2013) propose a global approach that addresses each of these in turn, cumulating in a burden of proof framework to guide a developer's assessment of whether no net loss associated with the significant residual effects of their project can actually be achieved with a biodiversity offset. This approach was developed with research support from the New Zealand Biodiversity Offsets Programme and is recommended as a general adaptable framework for assessing limits to offsets when using the Guidance. Other approaches are detailed by BBOP (BBOP 2012b).

The Pilgrim et al. (2013) framework can be found here