



# Aligning Mitigation Outcomes with Biodiversity Goals and Targets



Impact Mitigation and  
Ecological Compensation  
Thematic Group

*How can net outcome approaches contribute to broader biodiversity targets?*

**Measures to mitigate impacts on biodiversity are most effective when they achieve outcomes aligned with defined policy goals and national or regional targets for biodiversity. If this alignment is missing, then mitigation at individual project level may fail to contribute optimally to achieving overarching biodiversity targets. To be meaningful and clarify expected outcomes for biodiversity and stakeholders from mitigation policy, the frame of reference used to assess biodiversity losses, gains and net outcomes must be made explicit (i.e. we must consider: relative to what scenario is no net loss or net gain to be achieved?). This frame of reference determines whether mitigation aims to deliver net gains relative to a trend of biodiversity decline—in other words, a slower rate of decline—or absolute net gains—improvements in biodiversity over time. This frame of reference should be aligned with overarching biodiversity goals, ideally those of biodiversity recovery (i.e. ‘nature positive’).**

To achieve national and international biodiversity goals and targets (e.g. those agreed under the Kunming-Montreal Global Biodiversity Framework), a wide range of tools and interventions is needed. These can include expanding protected area networks and other effective area-based conservation measures (OECMs), restoring and conserving areas providing connectivity across land and seascapes to allow for climate change adaptation, and regulating the use of, or impacts on, biodiversity in different land-use sectors. To complement these conservation actions, measures that mainstream consideration of biodiversity in economic activity are necessary, including measures to address how companies’ supply chains and people’s consumption patterns affect biodiversity.

Robust policy and legislation are also needed to address impacts and risks to biodiversity from project development (e.g. for mines, roads, housing). Such mitigation policy, applied at project and strategic levels, will be most effective when it requires the rigorous application of the full mitigation hierarchy, and when it specifies a clear goal and biodiversity outcome that is to be achieved (see *Brief 4: Strategic Planning for the Mitigation Hierarchy*).

## The meaning of no net loss, net gain and similar goals

Goals such as no net loss (NNL) or net gain (NG) of biodiversity can be important elements of biodiversity policy. They are increasingly used by government and the private sector to frame their mitigation policies. When well-designed and carefully implemented, such policies can contribute substantially to good outcomes for nature and for people. However, to be meaningful and clear about what outcomes can be expected for biodiversity, these ‘net outcome’ goals need to be qualified. This means that the frame of reference needs to be made explicit: ‘No net loss compared with what reference?’

There are several options for choosing a reference level for NNL/NG. These different options have different implications for biodiversity outcomes and, as such, the extent to which they can contribute to achieving national or international biodiversity goals and targets also differs.

### *No net loss / net gain compared with ‘now’—absolute net gains*

Most people would likely understand ‘no net loss’ to mean no overall change in biodiversity levels over time—for example, no difference in the state of biodiversity before and after project development (when considering both impacts and mitigation measures). Using such a fixed reference level, set to a particular point in time and/or a particular state of biodiversity (*Fig. 1a*), means that mitigation measures, including offsets, need to achieve absolute biodiversity gains, based on actions that improve biodiversity condition (e.g. through restoration, removing invasive exotic species, reintroducing native species, rewilding, and other positive management interventions). Examples include:

- The Land Degradation Neutrality goal under the United Nations Convention to Combat Desertification, which uses the year 2015 as a fixed reference;
- The UK’s Biodiversity Net Gain policy, which is an offset policy requiring absolute net gain outcomes at the project level based on a (baseline) assessment of biodiversity at the project site before permits are granted and works begin; and
- The global societal goal of Nature Positive, based on the ambition to halt and reverse biodiversity loss measured relative to the year 2020 (see *Box 1*).

### **Box 1: The Global Biodiversity Framework and Nature Positive**

The global Biodiversity Plan (Kunming-Montreal Global Biodiversity Framework) was agreed in 2022 by 196 nations under the Convention on Biological Diversity (CBD). The Plan aims ‘...to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet...’. To do so, it sets out four long-term outcome-orientated goals, including to maintain, enhance or restore the integrity, connectivity and resilience of all natural ecosystems, substantially increasing their area by 2050, as well as 23 action-based targets for the protection, restoration, and sustainable use and management of biodiversity and associated resourcing. Countries are framing their national biodiversity targets, strategies and action plans to contribute to these global goals.

At the same time, there are increasingly calls by diverse actors for a ‘nature positive’ future, which is broadly consistent with the ambition in the Biodiversity Plan. The definition of ‘nature positive’ as a global societal goal is to halt and reverse nature loss measured from a baseline of 2020, through increasing the health, abundance, diversity and resilience of species, populations and ecosystems so that by 2030 nature is visibly and measurably on the path of recovery (Nature Positive, 2024). To put this more simply, it means ensuring more nature in the world in 2030 than in 2020, and continued recovery after that.

An important feature about the way that the nature positive goal is framed is that the outcome must be achieved relative to a fixed baseline state of biodiversity—that is, in absolute, not relative, terms. Nature-positive outcomes are, therefore, only possible if any biodiversity lost from 2020 onward is more than fully replaced. Aspirations for both businesses and governments to contribute to the goal of nature positive are gaining traction. While standards to ensure they deliver benefits for biodiversity which more than fully compensate for impacts have yet to be developed, key principles to guide the approaches have recently been proposed.

#### *No net loss / net gain compared with a counterfactual trend—relative net gains*

Alternatively, mitigation policies can adopt a dynamic reference level (or counterfactual scenario). In this case, no net loss or net gain is to be achieved relative to a biodiversity trajectory representing what would have happened without the project and its mitigation measures, including offsets. This trajectory represents a ‘background rate’ of biodiversity change over time. If this trajectory is presumed to be one of future decline (*Fig. 1b*), then it is possible to use a type of offsetting called ‘averted loss’. This relies on preventing the degradation or loss of existing biodiversity (e.g. by protecting at-risk areas from various threats), where no net loss or net gain outcomes are calculated relative to the predicted level of decline. The overall outcome would be less biodiversity after the project than before, but not less than what was otherwise expected to occur in the absence of the project and its mitigation measures.

This kind of approach, involving relative NNL/NG, can be valid but also challenging to design and manage well (see *Brief 9: Measuring Loss and Gain: Additionality*).

While it aims to neutralise the impacts attributable to a specific project, broader biodiversity goals and targets are not considered and net outcomes from such mitigation policies will not make a material contribution to reaching jurisdictional biodiversity targets. Several offset policies (e.g. in Australia) are, for example, built around a dynamic reference.

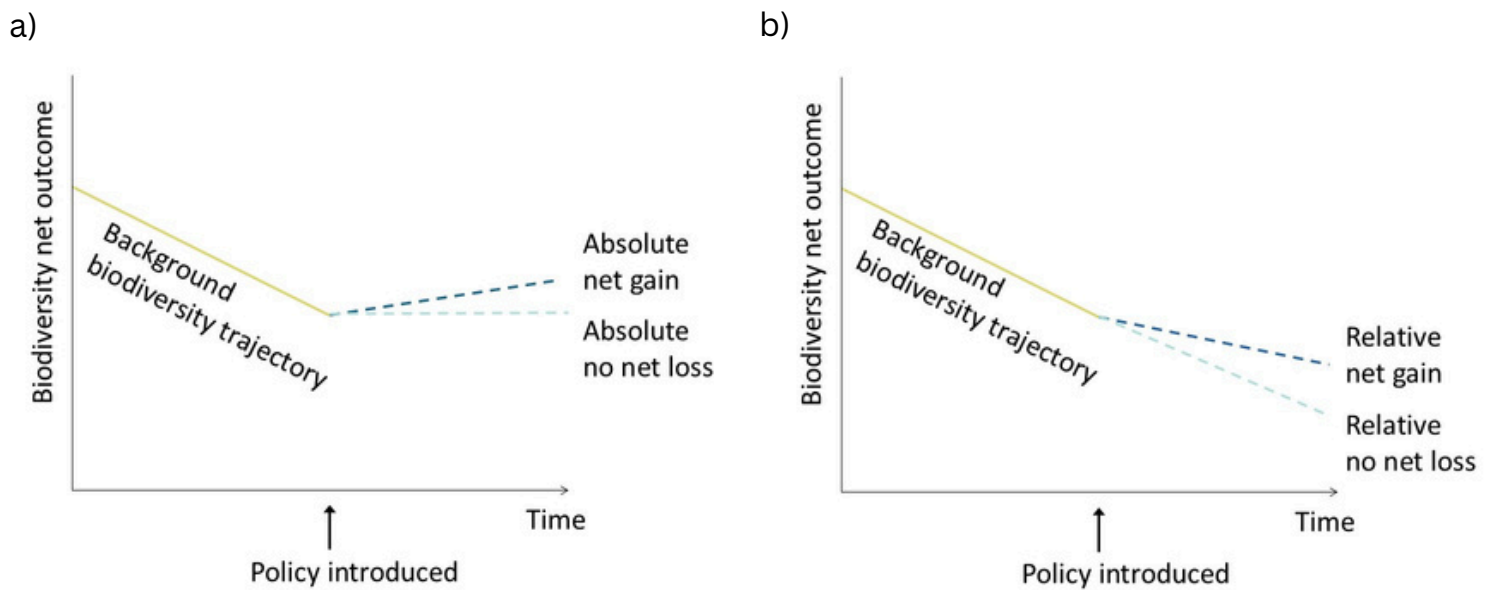


Figure 1. Illustrates different reference levels or scenarios, where no net loss or net gain is a) measured relative to a fixed reference level (absolute net outcomes) and b) measured relative to a counterfactual of biodiversity decline (relative outcomes).

### No net loss / net gain using a target-based approach

To ensure better alignment of mitigation and biodiversity policies, the frame of reference for no net loss, net gain and similar goals can be based on broader jurisdictional (e.g. national or regional) biodiversity targets. This approach, referred to as ‘target-based ecological compensation’, ensures that project level mitigation outcomes are consistent with desired biodiversity outcomes (i.e. targets) in the wider landscape. The target serves as a fixed reference level.

Broadly speaking, the target-based approach to mitigation works as follows: when biodiversity in the landscape is approximately at the desired target state, project level mitigation needs to deliver absolute no net loss outcomes to maintain that state. When biodiversity is below the target state, project level mitigation needs to deliver absolute net gain outcomes, scaled to the target level.

Say, for example, there is a jurisdictional target to double the area of habitat for koalas, to enable their recovery. Under target-based ecological compensation, a project that causes a loss of 10 hectares of that species’ habitat would need to restore or recreate 20 hectares of that same species’ habitat. The project has created twice as much habitat as it destroyed, and therefore contributes to the target of doubling habitat availability for that species.

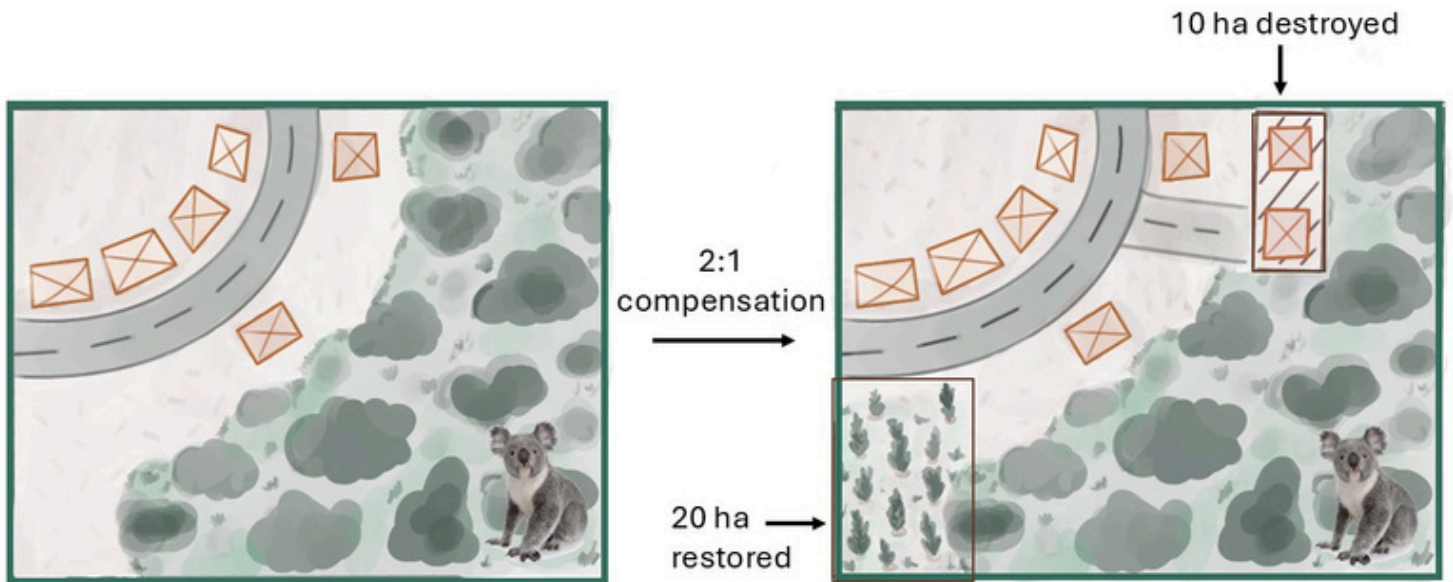


Figure 2. For every 10 hectares of koala habitat lost, 20 hectares are restored, ensuring a net gain and contributing to habitat recovery.

Whether NNL or NG is the required pathway under a target-based approach, compensatory actions must improve the state of biodiversity and provide absolute net gains, complemented by actions that ensure the persistence of these gains (e.g. through securing and protecting the relevant area). Note that, under the target-based approach, there may be situations where biodiversity may be above the given target. In those exceptional cases, some net loss may be acceptable, if strictly managed. A target-based approach can bring several benefits (see *Box 2*).

### Box 2: Target-based ecological compensation: key differences

- **Proportionate compensation:** The approach determines the type and amount of compensation required for every unit of loss based on estimates of the current state of the affected biodiversity feature, the target amount of the biodiversity feature, and regulatory control of sectors that cause biodiversity loss through their activities.
- **Clear and consistent compensation:** The type and amount of compensation required for a particular loss are assessed using a simple framework, and requirements for project proponents and outcomes for stakeholders are clear and consistent. The relative contribution of different sectors to achieving targets is explicit. Mitigation outcomes and compensation requirements are aligned with the desired trajectory for a particular species or ecosystem, depending on what is needed to meet a given target.
- **No counterfactuals:** Plausible dynamic reference levels are complex to establish, subject to uncertainty and manipulation, and they tend to be done in a piecemeal project-by-project manner. A target-based approach does not require counterfactuals to be established.

## *Target setting for success*

Having overarching targets—or establishing these—for biodiversity in a jurisdiction is a prerequisite for this mitigation approach. These targets should be ambitious and outcomes-based, describing the desired state of biodiversity that is to be reached (e.g. retaining and conserving at least 50% of a particular ecosystem’s historical extent in good condition over the long term, or increasing the population of a threatened plant by 20%). They should also be consistent with national and international goals and commitments for biodiversity, such as those set out in a country’s National Biodiversity Strategy and Action Plan. Targets should be set for different aspects of biodiversity that people care about, including those relating to use and cultural values of affected communities (see *Brief 7: Considering people as well as biodiversity*).

National biodiversity assessment and planning processes, such as Red Listing to determine the threat status of ecosystems and species, the identification of Key Biodiversity Areas and participative systematic conservation planning, are good opportunities for setting and utilising biodiversity targets.

Of utmost importance with any mitigation approach is applying a precautionary approach throughout, and respecting limits to what can be compensated or offset: ‘no loss’ rather than ‘no net loss’, and impact avoidance, ideally combined with long-term conservation measures, are essential to retain irreplaceable biodiversity (see *Brief 5: Steps 1 and 2 in the Mitigation Hierarchy: Avoid and Minimise*).

## About COMBO+ and IMEC

From 2016 – 2025 AFD and FFEM financed the **Conservation, Mitigation and Biodiversity Offsets Programme (COMBO+)**, as part of which technical briefs 1 -10 were drafted, in collaboration with the IUCN Thematic Group Impact Mitigation and Ecological Compensation. COMBO has been implemented across six countries in Africa and Asia, together with government, private sector and civil society, to help reconcile economic development and biodiversity conservation through application of the mitigation hierarchy in policy and practice to achieve no net loss or net gain of biodiversity and contribute to national biodiversity targets aligned with the Kunming-Montreal Global Biodiversity Framework. The initiative was led by the Wildlife Conservation Society in partnership with Biotope, BIOFUND, Guinée Ecologie, Myanmar Biodiversity Fund and the University of Queensland.

The **Impact Mitigation and Ecological Compensation (IMEC)** Thematic Group of the IUCN's Commission on Ecosystem Management (CEM) serves as an international community of practice, guiding best practice application of the mitigation hierarchy and improving alignment of impact mitigation and ecological compensation with biodiversity targets.

## Useful resources

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