

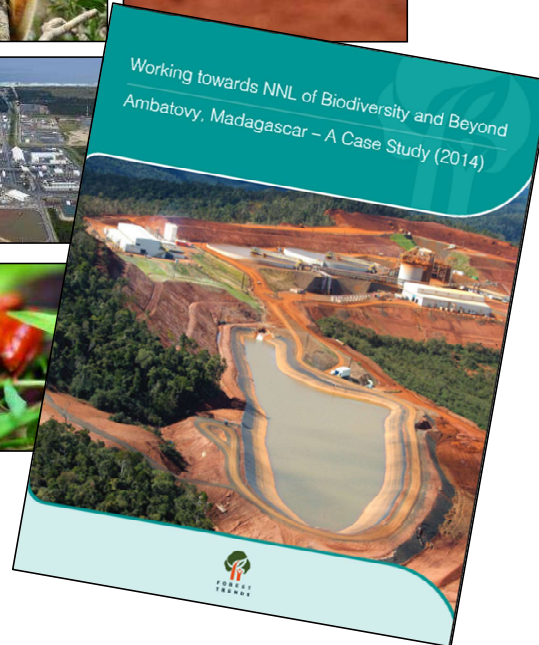
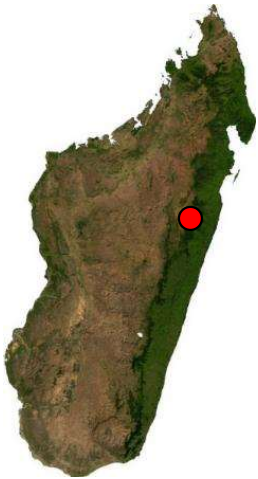
What does
No Net Loss
mean?



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The case of Ambatovy (Madagascar)



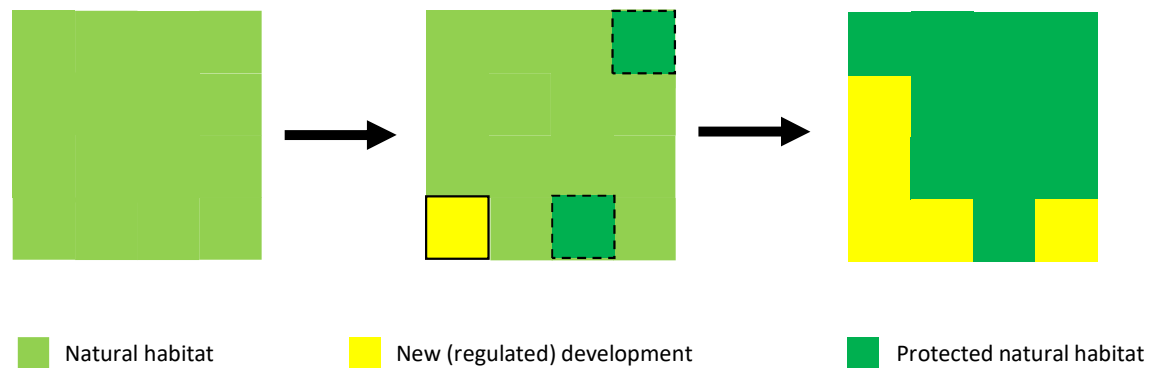
In short:

- Loss of 2000 ha of forest, including 50% of which on metal-rich soils
- 300+ ha avoided (resource foregone)
- Post-mining rehabilitation / restoration not taken into account
- Offsetting through the conservation of 20 000 ha of existing forest

x 10

Does this result in 'no net loss' or a 'net gain'?

Averted loss offsetting (1)

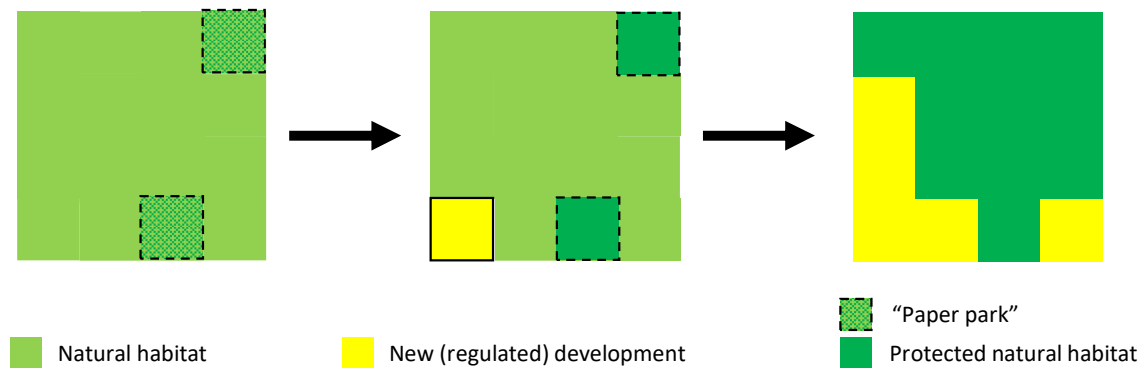


A 2-to-1 ratio means the loss of 1/3 of the existing habitat is acceptable

Simply protecting existing habitat leads to a 'net loss'

The area ratio used in sizing the area to protect determines the overall loss

Averted loss offsetting (2)



A 2-to-1 ratio means the loss of 1/3 of the existing habitat is acceptable

Simply protecting existing habitat leads to a 'net loss'

Funding existing but ineffective protected areas has the same outcome

The area ratio used in sizing the area to protect determines the overall loss

What about unregulated impacts from third parties?



Agriculture



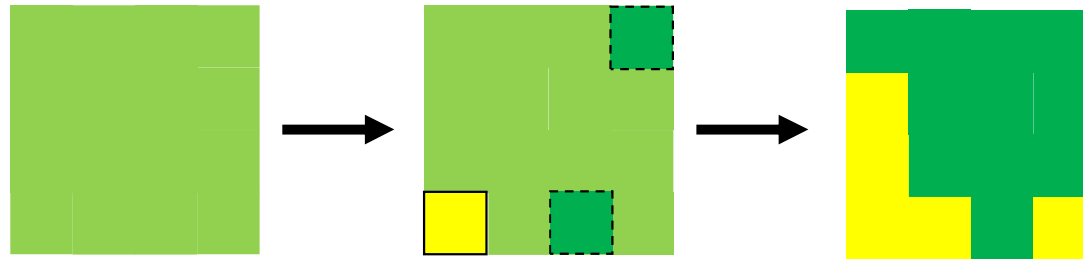
Hunting



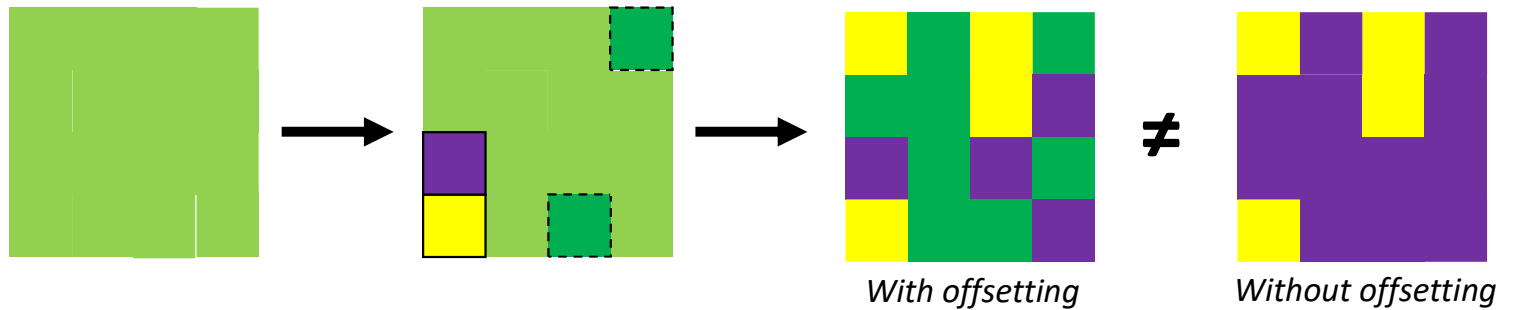
Charcoal production






Averted loss offsetting (3): addressing unregulated impacts

Unregulated impacts increase overall losses



'No Net Loss' relative to what?



-  Natural habitat
-  New (regulated) development
-  Protected habitat
-  Unregulated development / impact
-  Restored (and protected) habitat

Can biodiversity really be restored?



LNG terminal in Northern France

- Impacts on shorebird habitat
- Offset = conversion of farmland to shorebird habitat
- Management as a nature reserve by the local government



Can biodiversity really be restored?



Can biodiversity really be restored?



Options for restoration

Passive restoration through changes in management



Reintroductions



Plantations

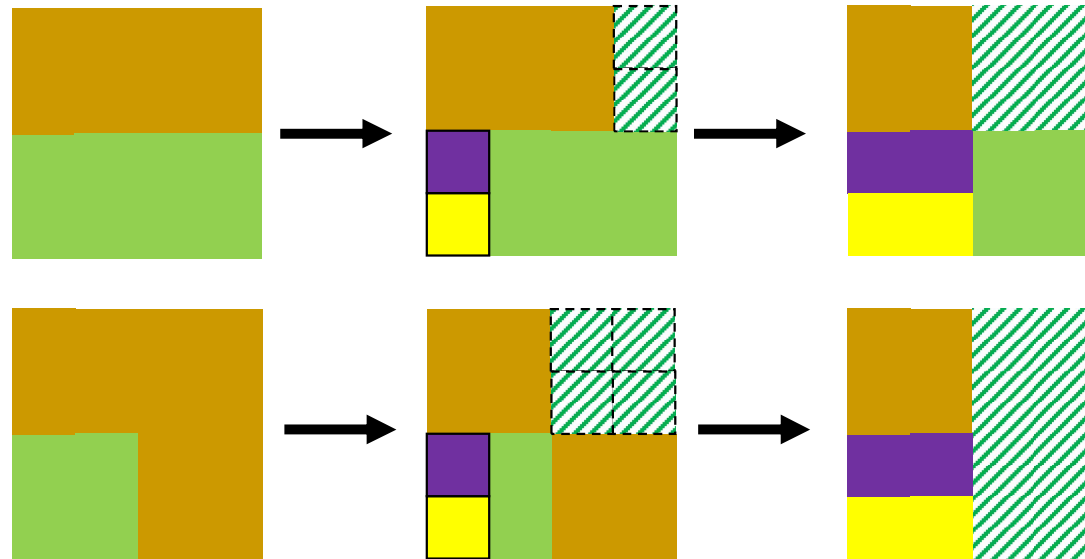


*Elimination of
invasive species*



The role of ecological restoration in offsetting

-  Natural habitat
-  Degraded habitat
-  New (regulated) development
-  Unregulated impact
-  Protected habitat
-  Restored (and protected) habitat



No Net Loss

Net Gain

Simply protecting existing habitat leads to a 'net loss'

The area ratio used in sizing the offset determines the overall outcome

Restoration isn't always possible... and often takes a long time

Does restoration make sense?



Traditional agricultural landscape in Western France

Habitat conversion

- Converting cropland into permanent grassland
- Converting tree plantations (e.g. poplars) into permanent grasslands or riparian woodland

Habitat restoration

- Clearing invasive species
- Adding missing 'ecological infrastructure' such as hedgerows, ponds, etc.
- Associated species translocations

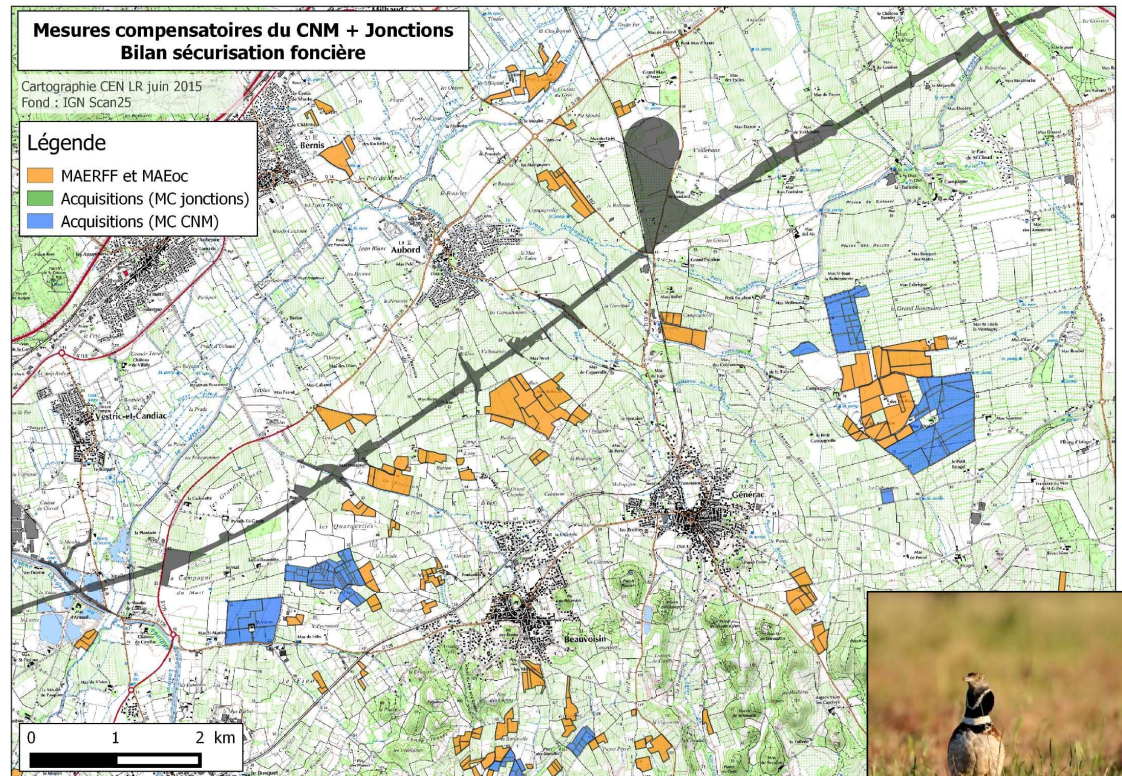
Changes in management

- Changes in the timing of e.g. hay cutting, etc.
- Conversion to organic agriculture
- Letting forests grow old

Offsetting habitat quality for the little bustard (*T. tetrix*)






Offsetting habitat quality for the little bustard (*T. tetrix*)







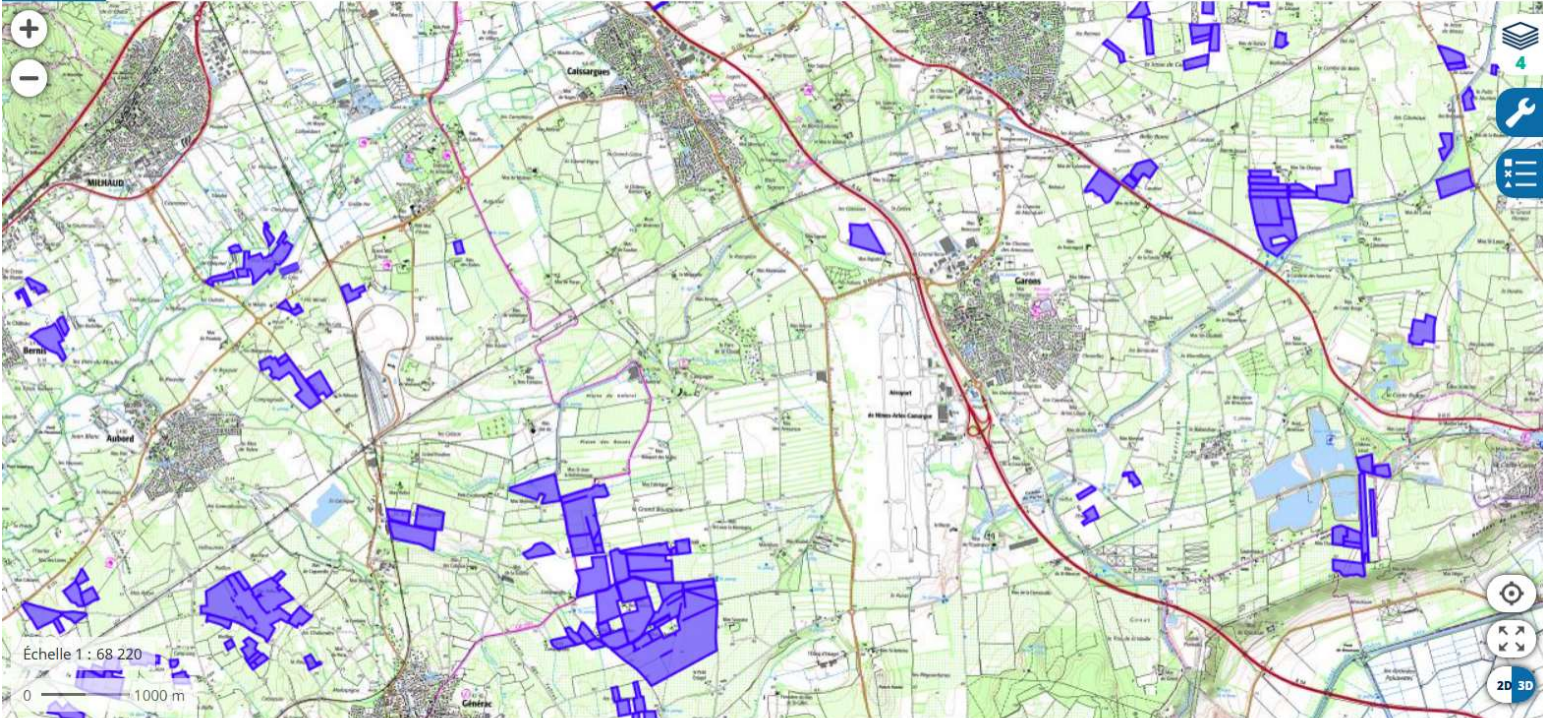
Calvet et al. (2019). Challenges of achieving biodiversity offset outcomes through agri-environmental schemes: evidence from an empirical study in Southern France. *Ecological economics* 163, 113-125.

Where are the offsets?





Échelle 1 : 68 220
0 1000 m

Données cartographiques : © IGN, CRIGE-PACA, FEDER, Région Occitanie, Région Provence-Alpes-Côte d'Azur, Département des Bouches-du-Rhône, MTEs, CEREMA

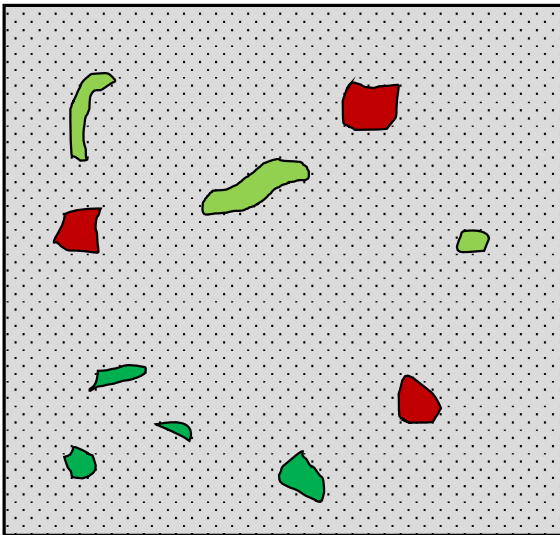
MESURES COMPENSATOIRES PRESCRITES DES ATTEINTES À LA BIODIVERSITÉ

Carte des mesures compensatoires prescrites des atteintes à la biodiversité.

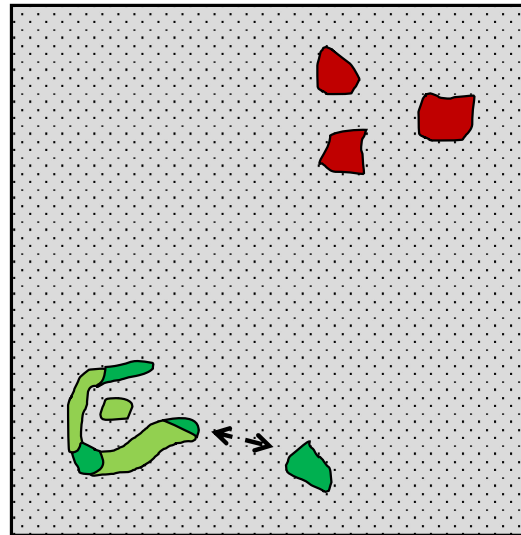
Une mesure compensatoire d'atteinte à la biodiversité n'intervient que sur l'impact résiduel d'un projet d'aménagement, lorsque toutes les mesures envisageables ont été mises en œuvre pour éviter puis réduire les impacts négatifs sur la biodiversité. Elle vise à offrir une **contrepartie positive** à un impact dommageable non réductible provoqué par un projet, de façon à **maintenir la biodiversité** dans un état équivalent ou meilleur à celui observé avant sa réalisation.

A savoir : seules les mesures compensatoires à visée environnementale (au sens du L.122-1 -III du code de l'environnement) sont représentées (par exemple, la compensation agricole collective ou la compensation forestière ne sont pas concernées). La carte concerne la métropole et les départements et régions d'outre-mer. Les mesures cartographiées sont celles prescrites dans un acte administratif, communautaire par l'article L.163-5 du code de l'environnement et

Offsetting strategically



Reactive piecemeal offsetting



Proactive offsetting

Offsets (and avoidance) should be designed to contribute to biodiversity goals at the landscape scale





Thank you!

