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The Global Biodiversity Framework's ecosystem restoration target requires more clarity and careful legal interpretation

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With the passage of the one-year anniversary of the Kunming-Montreal Global Biodiversity Framework (GBF), substantial effort is still needed to progress Target 2 – the ‘restoration target’. The restoration target guides parties to ‘ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity’ (1). This target is a critical step towards upscaling global restoration, but almost every word of it provides scope for legal and ecological interpretation. This could result in drastically different on-ground outcomes for conservation once applied at a national level.

Although nebulous targets are a common by-product of the international negotiation process (2), definitional uncertainty of the meaning of key terms can lead to drastically different models of implementation across different countries, and make success difficult to assess and measure (2),(3). More fundamentally, it is crucial that the key elements of Target 2 are interpreted in the spirit of the GBF – that is, to achieve rapid, ambitious, and large-scale restoration of global ecosystems: a critical goal given the ongoing deterioration of ecosystems globally.

Here, we unpack the elements of Target 2 - none of which are defined in the GBF itself - to highlight areas of definitional ambiguity, better guide consistency in implementation and encourage genuine progress towards its achievement.

The GBF is not explicit about whether the ‘30 per cent of areas’ must be achieved uniformly across all areas (i.e. terrestrial, inland water, marine, and coastal), and all ecosystems within those areas, or whether effort can be concentrated in different parts of the landscape. In the latter circumstance, this may bias efforts towards areas where restoration is more cost-effective (4) and governance frameworks are easier to navigate (5). The intention of the GBF should be clarified through the Conference of the Parties (COP) process.

The term ‘*degraded*’ (Supplementary Table 1) contemplates loss or decline, but it is unclear to what extent ecosystem functions or services must be reduced to be considered ‘degraded’. Classifying areas as degraded necessarily involves a comparison to an earlier, less degraded state, with the appropriate baseline to utilise in restoration the subject of intense debate (6). A global standard for the term ‘degraded’ can ensure consistency and should be considered at a future COP. Without it, there may be significant regional variation in reported progress across countries, as an ecosystem considered degraded in one country might be considered nearly pristine in another. Failing that, it is critical that local policy-makers articulate a metric for ‘degraded’ at the country level (7). In either case, ‘shifting baselines’ can be acknowledged through recognition that conditions have declined over generations, and a true historical reference point may require careful analysis (8).

‘*Restoration*’ means facilitating the recovery of degraded or destroyed ecosystems (Supplementary Table 1). It may incorporate a range of direct actions or threat reduction (9), and should be guided by national objectives and definitions for restoration (10),(11). The scale of action should be at the ‘*ecosystem*’ level rather than the individual species level, recognising that there are significant challenges in restoring individual components of ecosystems, and reinstating components does not guarantee ecosystem integrity and function or return of biodiversity (12).

This difficulty in securing the return of biodiversity may be problematic as ‘*under effective restoration*’ indicates that a project must be on a trajectory towards a successful outcome. The focus on outcomes rather than inputs is welcome due to past failures that have occurred where project indicators measure short term inputs rather than longer term outcomes (13), but it means that effectiveness may be difficult to assess. Effectiveness is also hard to define given the increasing influence of climate change on ecosystems and ecological processes and tendency towards ‘shifting baselines’ (8). Past ecosystem states and conditions will become less and less feasible to achieve through restoration, and restoration programs will require innovative approaches and a clear strategy to adapt to climate change in order to succeed. Finally, the baseline chosen and the definition of ‘effective’ restoration at a national scale will drastically influence reports of ‘success’ and can be articulated to allow for comparison of results of ‘effectiveness’ across countries.

Further, ‘*effective restoration*’ may also be informed by what immediately follows: ‘*in order to enhance biodiversity and ecosystem functions and services...*’. That is, effective restoration occurs when biodiversity, and ecosystem functions and services, are enhanced. The reference to ‘*biodiversity and*’ suggests that enhancement of biodiversity must be at the forefront of efforts as it has been singled out above other ecosystem functions and services. This is an important inclusion, as a workshop on the Post-2020 Global Biodiversity Framework recognised the risk of focussing on carbon outcomes at the expense of biodiversity (14). Beyond that, it is not clear if some ecosystem services can be prioritised over others, so this determination can arguably be made at the local level – which may potentially lead to very different results across countries due to local community values and prioritisation.

Finally, an approach that is aimed at restoring the values of as many species as possible is vastly different to one based on restoring ecosystems to promote human benefits (15). The reference to ‘*ecological integrity and connectivity*’ (Supplementary Table 1) suggests countries should aim to restore areas to achieve a composition, structure, function and ecological process close to that of a natural ecosystem, and indicates that efforts cannot be focussed squarely on enhancing anthropocentric ecosystems services.

In conclusion, Target 2 of the GBF represents an important commitment towards restoration, but every word in the target text is capable of legal and ecological interpretation that could markedly affect the success of on-ground initiatives. Although countries have discretion regarding how and where to implement restoration on the basis of their individual circumstances, it is important that thought is given to using standardised terminology and metrics that can enable genuine comparison across jurisdictions to progress this global target – both globally through the COP process and at the national level.

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