



Policy Forums

Reducing negative economic and equity implications associated with conserving 30% of the planet by 2030

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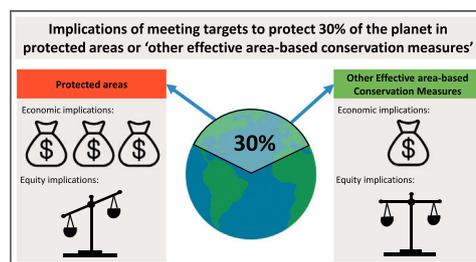
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HIGHLIGHTS

- Expanding protected areas is likely to have high economic costs and exacerbate inequalities.
- OECMs can provide a cheaper more equitable alternative to meeting area-based conservation targets.
- Effort and funds should focus on improving existing protected areas and designating new OECMs.

GRAPHICAL ABSTRACT



ARTICLE INFO

Article history:

Received 17 October 2022

Accepted 28 January 2024

Available online 5 February 2024

Keywords:

Post-2020 global biodiversity framework

Protected areas

OECMs

Conservation effectiveness

30×30

ABSTRACT

A key target for reducing biodiversity loss, outlined in the post-2020 Global Biodiversity Framework, is to protect 30% of the planet by 2030 (30×30) in protected areas (PAs) and 'other effective area-based conservation measures' (OECMs). There is concern that focusing on expanding PAs could exacerbate existing inequalities and that this may not be a cost-effective means to conserve biodiversity. There is already a lack of funding for existing PAs with many ineffectively managed. OECMs offer a potential solution to reach area-based protection targets in a more economically feasible and equitable way. The focus for 30×30 should be on improving the effectiveness of existing PAs and recognising existing areas that are providing conservation benefits as OECMs.

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Introduction

The world is facing unprecedented rates of biodiversity loss (IPBES, 2019). Further loss of biodiversity will negatively impact nature's contribution to people, driven by increased exposure to natural disasters, extensive agricultural productivity declines, and loss of function and resilience in natural ecosystems (IPBES, 2019). As governments are realising economic costs of biodiversity loss, policies are being developed to conserve biodiversity. A key target,

outlined in the post-2020 Global Biodiversity Framework (GBF), is to protect 30% of the planet by 2030 in protected areas (PAs) and 'other effective area-based conservation measures' (OECMs), hereafter 30×30 (CBD, 2021). This targeted expansion comes after nations failed to meet Aichi targets of protecting 17% of land and 10% of oceans by 2020. Now, 17.22% of land and 8.28% of oceans are in PAs or OECMs (Protected Planet, 2024).

Attempts to meet Aichi targets were primarily carried out through creating new PAs. OECMs were not defined until 2018, thus did not substantially contribute to Aichi targets (IUCN-WCPA Task Force, 2019). Compared to the 293,754 PAs, there are only 855 OECMs (Protected Planet, 2024). OECMs differ from PAs in that they

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can have primary objectives other than nature conservation, such as sustainable-use, as long as they provide secondary or *de facto* conservation (IUCN-WCPA Task Force, 2019). Although some less strict categories of PAs (V and VI) allow sustainable-use, they must still have conservation as a primary objective, and of the 139,095 PAs that have been assigned an IUCN category, ~71% do not allow sustainable-use (Protected Planet, 2024). So far, the primary focus 30×30 has also been expansion of PAs, rather than OECMs, and this has been criticised by over 120 NGOs for the social and economic inequities it may create (Rainforest Foundation UK, 2021).

Historically, strict PAs have been created using top-down approaches which often exclude and fail to consider needs of local people (Eicken et al., 2021), making them inequitable in terms of cost-benefit distribution (Holmes, 2007). This has, in some cases, led to the creation of “paper parks” – where PAs are legally designated but do not provide a conservation benefit due to a lack of management and support from local stakeholders and increasing pressures (Carey et al., 2000 and Di Minin and Toivonen, 2015). Conservationists are increasingly acknowledging the need to balance both conservation and social issues (Borrini-Feyerabend and Hill, 2015). OECMs may provide a more equitable opportunity to balance these issues as they allow management to focus on sustainable socio-economic activities. Whilst both PAs and OECMs will be required to reach 30×30, here I discuss whether prioritising designation of new OECMs and improving existing PAs, could provide a cheaper, more beneficial, and more socially acceptable solution to meet 30×30.

Economic costs of 30×30

Meeting 30×30 through creating PAs is estimated to require economic investment of US\$103-US\$178 billion annually; a more than US\$78.7 billion increase from the annual US\$24.3 billion currently spent on PAs (Waldron et al., 2020). The GBF commitment to increase biodiversity-related financial aid by US\$30 billion is too low (CBD, 2021), especially as 92.7% of key biodiversity areas (KBAs) – areas likely to be disproportionately important for PA expansion – are in low- and middle-income countries (Kullberg et al., 2019). With limited conservation budgets available, particularly in developing countries, it is important that cost-benefit ratios are considered (Naidoo et al., 2006). PAs can provide economic benefits such as ecotourism revenue, carbon markets, REDD+ programmes and investments from nature-based solutions (Balmford et al., 2015). However, less developed PA sectors may be less able to obtain these benefits due to insufficient resources (Waldron et al., 2020). Furthermore, current spending on PAs is considered inadequate with 75% of PAs lacking funding and therefore being ineffectively managed (Coad et al., 2019). Expansion of PAs in regions where funding is already lacking could further dilute management resources and reduce overall effectiveness (Kuempel et al., 2018). Expanding PAs to the extent required to meet 30×30 and ensuring they are effectively protecting biodiversity is unlikely to be economically feasible. Focusing instead on improving existing PAs will be less costly, will contribute to ensuring areas are “effectively conserved and managed”, and may have similar conservation benefits due improved effectiveness (Kim et al., 2019).

Economic costs of expanding OECMs have not been formally estimated (Waldron et al., 2020); however, it has been suggested that OECMs could be a more cost-effective method for reaching 30×30 (Dudley et al., 2018). Many areas that could be OECMs already exist (Donald et al., 2019) which suggests that part of 30×30 could be met just through designating these. This will still increase costs due to the need for monitoring to provide evidence that the area is providing a conservation benefit; however, these costs are likely to be lower than those needed to expand PAs.

For example, Indigenous territories can be classified as OECMs if free, prior informed consent is provided and if secondary conservation occurs through Indigenous peoples managing and maintaining local ecosystems in their natural or near-natural state (IUCN-WCPA Task Force, 2019). Lessmann et al. (2019) calculated that expanding conserved areas of the Amazon Rainforest without incorporating Indigenous territories would be 39% more expensive and protect 20 fewer species. As Indigenous peoples manage over a third of natural lands (Garnett et al., 2018), this provides a vast and cost-effective opportunity for 30×30. Although some Indigenous territories can be classified as PAs, there is greater opportunity for Indigenous territories to contribute to 30×30 through OECM classification as this does not require conservation to be the primary purpose.

Opportunity costs of 30×30

Expanding PAs has additional implications in terms of opportunity costs. These are losses due to missed opportunities to use the area in alternative, potentially more profitable ways (Naidoo et al., 2006) such as forestry, agriculture, and fishery sectors (Waldron et al., 2020). For example: establishment of a PA in Madagascar resulted in opportunity costs for local forest communities which made up 27%–84% of annual income for medium-income households (Poudyal et al., 2018); creating PAs in Cambodian forests had an opportunity cost of nearly US\$17,000 per hectare (Warren-Thomas et al., 2018); and expanding PA coverage to meet previous Aichi targets was found to have agricultural opportunity costs of US\$42.5 billion annually (Venter et al., 2014). To meet 30×30 through establishing more strict PAs, opportunity costs experienced by local stakeholders would need to be fairly compensated through, for example, emerging carbon markets. Prioritising sustainable-use PAs for PA expansion, may have lower opportunity costs, as these have been demonstrated to have human welfare benefits (Campos-Silva et al., 2021).

OECMs are expected to have lower opportunity costs than PAs because they can explicitly focus on other sectors, thereby allowing other income sources to continue (IUCN-WCPA Task Force, 2019). This is especially important for vulnerable communities who are dependent on their local environment to survive (Diz et al., 2018). Locally managed marine areas in Mozambique are potential OECMs which contribute to long-term equitable conservation of marine biodiversity while allowing for sustainable use by local communities improving both local wellbeing and food security (Diz et al., 2018).

How equitable are approaches to meet 30×30?

There is often inequity in the distribution of costs and benefits from PAs with greater negative impacts to those living close to PAs (Poudyal et al., 2018). For example, marine PAs with strict no fishing zones protect marine biodiversity for the greater good but have local costs for fishers losing their livelihoods (Campbell and Gray, 2019). These negative impacts on local communities could also create conflict and undermine PA effectiveness (Dawson et al., 2021). Conservation interventions are generally more accepted by local people and more successful when they consider local wellbeing and incorporate local people into decision-making (Dawson et al., 2021). Growing evidence of this has resulted in updates to PA management practices and establishment of more sustainable-use PAs which have many of the equity benefits of OECMs (Adams et al., 2023). However, a long history of top-down fortress conservation associated with PAs has tainted their reputation and may lead to them being less effective due to previous perceptions. More work is needed to demonstrate that well-managed PAs can be beneficial to both nature and people to change these perceptions.

As OECMs are a newer concept, they have a ‘clean slate’ and there is the opportunity to learn from the mistakes that were made with PAs. As OECMs are often community led (Jonas et al., 2014), and managed by a wider variety of stakeholders (Maxwell et al., 2020), they are more likely to be accepted and result in long-term biodiversity protection (Alves-Pinto et al., 2021). Additionally, communities themselves are more likely to reap the benefits as OECMs can support local economies with the added advantage of conserving environmental assets that communities rely on (Marnewick et al., 2021). However, there is increased uncertainty around OECMs due to limited evidence and reduced understanding of the factors important for achieving successful long-term conservation as well as benefits for local communities (Cook, 2023). If conservationists learn from mistakes in PA establishment when establishing OECMs, and build an evidence base for OECMs over time, they could provide a more inclusive conservation strategy which promotes collaboration, mutual benefits, and reduced alienation of marginalised groups (Dudley et al., 2018).

Meeting 30×30

Although this article calls for OECM expansion as a priority for meeting 30×30, effectively and equitably managed PAs still have a hugely important role to play in global biodiversity conservation. However, before expanding PAs it is more important that existing PAs are made effective (Watson et al., 2014) to ensure “paper parks” are not counting towards 30×30. Existing PAs can be improved through funding increases (less than those needed to expand PAs), more effective management, and better aid for communities that live in or near PAs (Snyman and Bricker, 2019). Initiatives associated with PAs should focus on creating beneficial relationships with local communities and distributing costs and benefits more equitably. This will create better acceptance of PAs by local people and likely result in more effective conservation (Dawson et al., 2021). Although focusing on improving existing PAs does not add to the area-based target, it helps to ensure that PAs counted towards meeting the target are providing a benefit to biodiversity and are doing so equitably.

OECMs can complement the existing PA network through increasing ecological representation and connectivity (Cook, 2023). However, there are still major challenges in successfully expanding OECMs to meet 30×30 in such a short timeframe. Procedures for detecting, monitoring, and incentivising OECMs have not been readily put into practice (Dudley et al., 2018). These procedures will require careful planning, research, and testing, all of which will take time and funds. Currently, the limited understanding on what counts as an OECM and what indicators should be used to demonstrate success increases the risk that they could dilute existing conservation efforts (Alves-Pinto et al., 2021 and Cook, 2023). To reduce this risk, scientists and both international and national leaders must prioritise the development of effective strategies for identifying potential OECMs, determining whether they meet the criteria, and continually monitoring them to ensure they continue to protect biodiversity long-term (Dudley et al., 2018). There is concern that limited resources will mean that communities struggle to provide continual monitoring (Jonas et al., 2018); therefore, incentives such as payments for ecosystem service schemes, alternative livelihood schemes, value chain improvement and capacity building are needed (Dunbar et al., 2022). This could aid those who are already contributing to protecting biodiversity and persuade those who could contribute to do so.

Prioritising expansion of OECMs and improving existing PAs could provide a more effective approach to reach 30×30 while complementing the existing conservation network. Although this is a large undertaking in such a short timeframe and will require

support and commitment from local, national, and international stakeholders, it will likely result in 30×30 being less costly to implement, having lower opportunity costs, and producing a more equitable spread of costs and benefits while also providing more effective conservation and contributing to other sustainable development goals.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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