



# LANDSCAPE APPROACHES FOR THE 30X30 TARGET: POTENTIAL APPLICATIONS AND PRACTICAL RECOMMENDATIONS

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## ABSTRACT

Landscape approaches have been recognised as an effective solution for reconciling conservation and developmental demands at local scales. Though suitable in various contexts of human–nature interactions, their application is increasingly considered in relation to area-based conservation. Target 3 (30x30 Target) of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) specifically calls for protected areas, other effective area-based conservation measures (OECMs) and Indigenous and traditional territories to be “integrated into wider landscapes and seascapes and the ocean”. This short communication pursues three objectives. First, we suggest various area-based conservation settings where a landscape approach can be applied. Second, we discuss how characteristic features and strengths of landscape approaches can be leveraged to support Target 3. Lastly, we provide practical recommendations for enabling their effective operationalisation.

**Keywords:** area-based conservation, integrated approach, multifunctional land- and seascapes

## LANDSCAPE APPROACHES TO AREA-BASED CONSERVATION

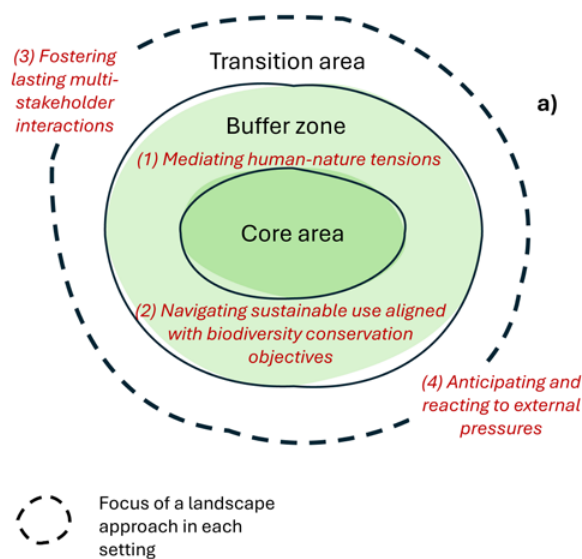
Post-2020 area-based conservation requires a new set of implementation tools (Bakarr, 2023; Gurney et al., 2023). There is a need for more people-centred approaches (engagement of Indigenous peoples and local communities (IPLC), emphasis on sustainable livelihoods and social equity), integrated strategies to tackle cross-sectoral challenges and their impacts (biodiversity conservation, climate change, food security and others), and participatory and inclusive processes with a clear monitoring of outcomes (Esmail et al., 2023; Neyret et al., 2023). A whole-of-system approach to conservation is also required to ensure supply of ecosystem functions and services as well as connectivity between multiple sites. In the context of forests and forestry, for example, a mosaic of protected areas and other managed lands may be needed to encompass a full range of ecosystem functions (Dudley et al., 2006).

Since the early 2010s, landscape approaches as integrative, adaptive and participatory strategies to

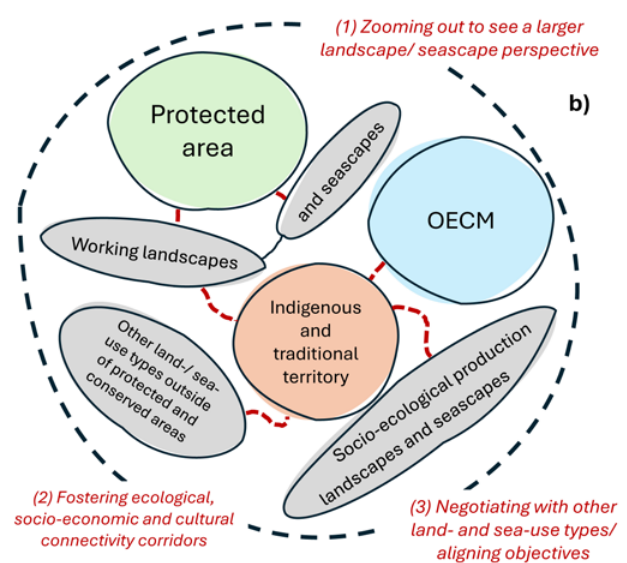
address competing socio-economic and environmental objectives in the context of multifunctional land- and seascapes have been gaining prominence (Arts et al., 2017; Karimova & Lee, 2022; Reed et al., 2016). Though more commonly applied outside of protected and conserved areas (Nishi & Yamazaki, 2020), landscape approaches can also be leveraged to accommodate the socio-ecological complexity of area-based conservation. For example, Dudley (2024) highlights landscape approaches as one of the potent solutions for stemming biodiversity loss. Moreover, Target 3 (the 30x30 Target) of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) stipulates the need for protected areas, other effective area-based conservation measures (OECMs) and Indigenous and traditional territories to be “integrated into wider landscapes and seascapes and the ocean” (CBD, 2022).

In this paper, we offer a framework for applying a landscape approach to area-based conservation. There are several questions that guide our commentary. First, where does a landscape approach fit in an area-based

**Setting 1: A landscape approach** for a protected area/ biosphere reserve with complex socio-ecological dynamics



**Setting 2: A landscape approach** for a system of protected and conserved areas within a wider spatial context



**Figure 1.** Examples of landscape approaches for various area-based conservation settings: (a) for a biosphere reserve or single protected area within a wider landscape; (b) for a system of protected and conserved areas within a wider landscape/seascape matrix

conservation context? Second, how can the strengths of landscape approaches be leveraged to support Target 3? Third, what should we be mindful of for their effective operationalisation? We use landscape approaches as an overarching term that refers to integrated landscape and seascape approaches and other synonymous concepts (Arts et al., 2017; Karimova & Lee, 2022; Reed et al., 2016).

## LANDSCAPE APPROACHES IN AN AREA-BASED CONSERVATION CONTEXT

A landscape is a result of interactions between natural and cultural entities within a defined geographic space (Jones, 2003; Phillips, 1998). We thus view the notion of integration into “wider landscapes, seascapes and the ocean” (CBD, 2022) as not only addressing the ecological integrity, functionality and connectivity of protected and conserved areas with their surrounding lands and waters, but also as the need for inclusion of socio-economic and cultural components into integrated management of the sites. In other words, when looking at Target 3 through a landscape lens, what we see is a complex socio-ecological system that requires a holistic and balanced approach. This means that application of a landscape approach in an area-based conservation context can be useful in various types of settings, examples of which are shown in Figure 1.

As shown in the first setting, a landscape approach can address the need for integrated, adaptive and participatory management of protected areas and

biosphere reserves with inherently complex socio-ecological dynamics (Figure 1a). A landscape approach to area-based conservation can help to (1) mediate human–nature tensions along the boundary of core areas and buffer zones (e.g. human–wildlife conflicts); (2) understand the root causes of unsustainable use activities (e.g. poaching of wildlife and illegal logging) and navigate sustainable use activities aligned with biodiversity conservation objectives (e.g. foraging for medicinal plants based on traditional ecological knowledge and community-based ecotourism); (3) foster and maintain ongoing and lasting multi-stakeholder interactions for the long-term management of a site, including mutual benefits for biodiversity and local livelihoods; and (4) predict and react to external pressures (e.g. cropland expansion or infrastructural developments) (Johnson, Karantha & Weinthala, 2018; Meng et al., 2023).

The second larger and more complex setting focuses on connectivity and multifunctionality of protected areas, OECMs and Indigenous and traditional territories within their wider landscapes and seascapes (Figure 1b). In this setting, a landscape approach can (1) ensure that the plan for a single site takes into account and integrates with the wider spatial setting (especially in the context of small-size protected and conserved areas); (2) foster ecological, socio-economic and cultural connectivity between stand-alone protected and conserved sites located in close proximity to each other (e.g. through sustainable production corridors or wildlife movement corridors);



Biodiversity conservation and sustainable use in a socio-ecological production landscape and seascape, Xinshe Village, Hualien County, Taiwan: a) eco-friendly cultivation of indigo plant (*Indigofera tinctoria*); b) community-based conservation of Gray-taek Crab (*Geothelphusa cinerea*) © Kuang-Chung Lee



**Figure 2.** Example of the 6Ps operationalisation in the context of a socio-ecological production landscape and seascape in Xinshe Village, Hualien County, Taiwan.

and (3) negotiate and align biodiversity conservation and sustainable management objectives with other land- and sea-use types present in the area (e.g. working landscapes and seascapes, socio-ecological production landscapes and seascapes). Such a systems approach to conservation is also well aligned with Target 1 (spatial planning) and Target 2 (ecosystem restoration) of the KM-GBF (CBD, 2022).

With the understanding of where the landscape approaches can be applied and what they can help to achieve, we next look at how it can be done.

### THE 6PS OF THE LANDSCAPE APPROACHES TO SUPPORT TARGET 3

Building on our practical experience in facilitating landscape approaches in socio-ecological production landscapes and seascapes in Taiwan and drawing on relevant literature (Minang et al., 2015; Sayer et al., 2013; Scheyvens et al., 2017; Suit et al., 2021), we outline six strategic domains (the 6Ps) for operationalisation of landscape approaches in area-based conservation: place, problems, people, process, progress and upscaling. We explain their relevance to Target 3 below and provide a case study illustration in Figure 2.

**Place** – *ecologically representative, multifunctional and well-connected.* Landscape approaches operate within specified geographic and geo-cultural boundaries, defined by one or more territorial markers: natural barriers, administrative boundaries, traditional territories, settlement patterns and others (Suit et al., 2021). As ecosystem-based approaches, they take account of the integrity, multifunctionality and interconnectedness of various ecosystem types within a landscape/seascape and interlinkages between them (e.g. forest, stream, farmlands and intertidal zone in Figure 2). This feature can support appropriate and context-sensitive zoning for a single protected and conserved area (Figure 1a) and biodiversity inclusive spatial planning across several sites (Figure 1b). Various relational and cultural values, such as ancestral memory and connection with lands and waters, also play an important role in shaping the sense of Place.

**Problems** – *sustainable use with conservation outcomes.* Landscape approaches aim to address complex nexus issues in an integrated way. Such issues may include biodiversity conservation, production activities (e.g. farming, aquaculture, agroforestry), income generating opportunities (tourism and market access), land and coastal development, disaster risk reduction, climate adaptation and others (Chen et al., 2023; Minang et al., 2015). Through various consultative and participatory processes (e.g. multi-stakeholder workshops), landscape approaches can help to identify existing problems and elicit priority tasks for collaborative action in different contexts in a timely manner (Figure 1).

**People** – *equitably governed.* Landscape approaches promote participatory and multi-stakeholder arrangements focused on social equity, negotiations and collaborative governance. They take into consideration the diversity of actors and their often-competing interests and agendas – IPLC, government, private companies, NGOs, academia and others. A skilfully facilitated multi-stakeholder platform is the main engine that powers a landscape approach (Karimova & Lee, 2022). Jointly developed action plans based on division of resources and responsibilities, including financial, institutional and human capital, guide operationalisation. Various area-based conservation settings can benefit from this people-centred approach.

**Process** – *effectively conserved and managed.* In addition to all other characteristics, a landscape approach is first and foremost an adaptive and collaborative management process of balancing trade-offs and synergies. It consists of planning, implementation, monitoring and evaluation, and adjustment stages. Landscape approaches use a variety of monitoring and evaluation tools, such as, for example, community-based assessment of socio-ecological resilience (Karimova, Yan & Lee, 2022; Lee et al., 2020). These experiences can be leveraged to support the social aspect of management effectiveness, embracing a diversity of values and knowledge types to ensure the emphasis on sustainable livelihoods and social equity in area-based conservation (Gurney et al., 2023).

**Progress** – *long-term conservation outcomes.* Landscape approaches are generally designed for



People-centred approach to issue identification and monitoring in a socio-ecological production landscape and seascape, Xinshe Village, Hualien County, Taiwan © Kuang-Chung Lee



Landscape approach as a part of biodiversity-inclusive spatial planning in Fengbin Township, Hualien County, Taiwan © Kuang-Chung Lee

medium (five to six years) to long-term (10 years and more) periods. This distinguishes them from short-term (two to three years) project-based interventions that are often dependent on external funding cycles. In the future, adaptive capacity and resilience to newly emerging challenges and opportunities will be crucial for achieving the long-term conservation outcomes of Target 3. Working alone or in combination with other relevant approaches to area-based conservation (e.g. Indigenous and community conserved areas, ICCA), a landscape approach can help to ensure these dynamic and adaptive qualities in various settings (Figure 1).

**Upscaling** – *integrated into wider landscapes, seascapes and the ocean.* As indicated in Target 3 and demonstrated in Figure 1 (b), various approaches to area-based conservation can (and should!) coexist within an interconnected system of wider landscapes and seascapes. The upscaling characteristic of landscape approaches can help to strategically position site conservation efforts within wider geographic and socio-ecological contexts. This may be accomplished by sharing knowledge within extended stakeholder networks and integration of site conservation efforts into biodiversity-inclusive spatial planning at regional and national scales (Figure 2). Other forms of scaling (out and deep) may be explored as well (Moore, Riddell & Vocisano, 2015).

## READ THE INSTRUCTIONS BEFORE USE

Landscape approaches can assist us in making “biodiversity conservation a far stronger part of land, water and sea management policies” (Maxwell et al., 2020). As with any guiding framework, however, there are several important requirements for effective operationalisation.

- A careful understanding of site-specific settings (Figure 1) and estimation of required inputs and desired outcomes is critical. Landscape approaches generally do not require high financial investments but do rely on substantial input of time and human resources. To ensure an effective and lasting operationalisation of the 6Ps, the initiators of the approach need to foresee possible challenges well in advance and be prepared to adapt to uncertainties. This will help prevent abrupt termination of a landscape approach mid-process.
- Skilful facilitation of landscape approaches is key to their success. They do not happen on their own, but need to be initiated, supported and carried out by responsible actors. Mediators, also known as boundary brokers or bridging stakeholders, play an essential role when dealing with conflict situations (e.g. core and buffer zone conflict management), evaluating strategic priorities for integration of a site into a wider landscape network, or fostering connectivity pathways across sites. There is a need for further capacity development and knowledge exchange in this regard.
- An appropriate weaving of landscape approaches into existing conserved and protected area plans and

practices is highly recommended. Though the 6Ps are a useful framework for structuring the implementation of landscape approaches, they need to be implemented in a way that takes account of site-specific features and challenges. Moreover, the 6Ps resonate with other area-based conservation methods, including collaborative approaches, adaptive co-management and participatory monitoring. Such similarities need to be aligned and built upon to generate value-added management outcomes.

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## RESUMEN

Los enfoques paisajísticos se han reconocido como una solución eficaz para conciliar las exigencias de conservación y desarrollo a escala local. Aunque son adecuados en diversos contextos de interacción entre el hombre y la naturaleza, su aplicación se considera cada vez más en relación con la conservación basada en áreas. La Meta 3 (Meta 30x30) del Marco Global de Biodiversidad Kunming-Montreal (KM-GBF) pide específicamente que las áreas protegidas, otras medidas efectivas de conservación basadas en áreas (OECM) y los territorios indígenas y tradicionales se «integren en paisajes terrestres y marinos más amplios y en el océano». Esta breve comunicación persigue tres objetivos. En primer lugar, sugerimos varios entornos de conservación basados en áreas en los que puede aplicarse un enfoque paisajístico. En segundo lugar, analizamos cómo pueden aprovecharse los rasgos característicos y los puntos fuertes de los enfoques paisajísticos para apoyar la Meta 3. Por último, ofrecemos recomendaciones prácticas para permitir su aplicación efectiva.

## RÉSUMÉ

Les approches paysagères ont été reconnues comme une solution efficace pour concilier les exigences de conservation et de développement à l'échelle locale. Bien qu'elles conviennent à divers contextes d'interactions entre l'homme et la nature, leur application est de plus en plus envisagée dans le cadre de la conservation par zone. L'objectif 3 (objectif 30x30) du cadre mondial pour la biodiversité Kunming-Montréal (KM-GBF) demande spécifiquement que les zones protégées, les autres mesures efficaces de conservation par zone (OECM) et les territoires autochtones et traditionnels soient « intégrés dans des paysages terrestres et marins plus vastes et dans l'océan ». Cette courte communication poursuit trois objectifs. Tout d'abord, nous suggérons divers contextes de conservation par zone où une approche paysagère peut être appliquée. Ensuite, nous examinons comment les caractéristiques et les points forts des approches paysagères peuvent être mis à profit pour soutenir la cible 3. Enfin, nous fournissons des recommandations pratiques pour permettre leur mise en œuvre effective.