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Expanding the Role of Targets in Conservation Policy

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Conservation targets perform beneficial auxiliary functions that are rarely acknowledged, including raising awareness, building partnerships, promoting investment, and developing new knowledge. Building on these auxiliary functions could enable more rapid progress towards current targets and inform the design of future targets.

Conservation targets are a primary policy mechanism for addressing the global extinction crisis [1]. Targets provide time-bound goals against which to measure changes in biodiversity pressures and states and the impacts of conservation actions at global, regional, and national scales. To account for the competing political, socioeconomic, and environmental interests that are common in conservation policy, compromises are typically made during target development and implementation, which can weaken their primary objectives [2,3]. For example, targets can become less ambitious or less specific as a result of competing mandates [3,4].

Global targets in particular, such as the Convention on Biological Diversity (CBD) Aichi Targets and the UN Sustainable Development Goals (SDGs), are nonbinding and set by authorities with no regulatory or enforcement power, and as a result there are rarely any direct repercussions for the failure to meet such targets. However, does that mean that such targets have little impact on nature conservation? To answer this question, we need a broader appreciation of the roles that targets perform.

Although rarely acknowledged or capitalized on, conservation targets perform multiple auxiliary (i.e., supporting) functions, such as building partnerships and raising awareness, which we argue are fundamental to the implementation and impact of conservation targets. Given that preparations are underway to update the CBD targets and strategic plan by 2020, it is timely to consider the broader functions and outcomes of target-based conservation policy.

Here, we first consider the political dimensions of conservation targets as this provides support for the role of auxiliary functions. Then, by drawing on both social [3,5,6] and biological [2,7,8] sciences, we discuss four key auxiliary functions of conservation targets: raising awareness, building partnerships, promoting investment, and developing tools and knowledge (Figure 1). We argue that, besides being beneficial in and of themselves, these auxiliary functions can: (i) facilitate processes that contribute towards achieving the primary objectives of targets; and (ii) initiate feedbacks that improve future target-based initiatives.

While the auxiliary functions outlined here are sometimes named as targets themselves (e.g., Aichi Target 19: to improve, share and apply biodiversity knowledge), here we discuss how auxiliary functions can provide all targets with a much broader influence than their primary objectives (i.e., acting as an added benefit rather than being explicitly named as objectives themselves) (Figure 1).

Politics Shapes Conservation Targets

Political factors influence both the development and the implementation of conservation targets. Many conservation targets have been criticized for lacking ambition or scientific integrity and being primarily focused on political gain or economic feasibility [4]. Policy-driven targets with little to no scientific foundation tend to be less ambitious than evidence-based targets [4]. Targets can also be compromised by being ambiguously defined or quantified, underfunded, or clearly unachievable [9,10]. Governments can use scientific technicality or uncertainty to deflect attention away from what are ideological perspectives regarding the focus and scale of targets [3]. For instance, the Australian government's plan to cull 2 million feral cats by 2020 [11] may be politically motivated because although it appears impressive, it lacks a firm scientific foundation. At the global level, these issues can be compounded where multiple governments seek to prosecute diverse and conflicting economic or environmental objectives

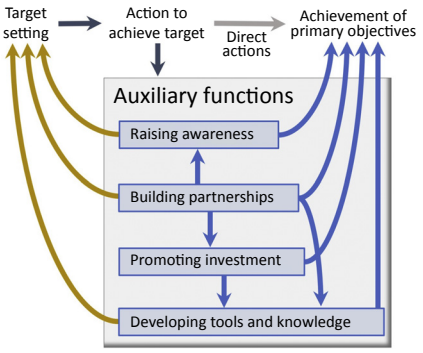

Figure 1. Four Auxiliary Functions Contribute to Achieving the Primary Objectives of Conservation Targets (Blue Arrows Inside the Box) and Influence the Setting of New Targets (Yellow Arrows on the Left-Hand Side). The gray arrow represents direct actions for meeting targets (e.g., establishing protected areas), which are not the focus here.

[3,5,10]. The outcome of such political influences can be targets that either cannot be met or have little direct impact – but this does not mean that such targets are without value.

More Than Numbers

Conservation targets have considerable potential for increasing the environmental awareness of policymakers and the public because they define issues and set priorities for action [6]. Although the 2010 CBD target to reduce global biodiversity loss was not met, the target delivered considerable benefits by placing biodiversity on the international political agenda and increasing awareness among politicians and the public [12]. This awareness raising informed and catalyzed the development of the Aichi Targets, which are seen as an improvement over the 2010 CBD targets due to their focus on specificity and measurability, although they are not without limitations [2,9].

Targets can motivate the development of strategic partnerships between governments, industry, and nongovernment organizations. Examples include the Global Partnership for Plant Conservation, the Asia Protected Area Partnership, the Biodiversity Indicators Partnership, and the Friends of Target 12. This last partnership comprises more than 30 institutions and organizations working together to prevent extinctions of known threatened species by 2020 to support Aichi Target 12. The global effort to expand marine protected areas has also resulted in both increased political awareness and the building of strategic partnerships. A rise in the number of large marine protected areas and multicountry partnerships has been attributed to political will to meet the 10% global coverage component of Aichi Target 11 [7]. Some multicountry partnerships are even aiming for more ambitious targets, such as the Caribbean Challenge Initiative's marine protected area target of 20% coverage. Such partnerships illustrate how targets can instigate positive feedback loops in conservation policy (Figure 1).

Political and social will to set and meet more ambitious targets often promotes increased investment [13]. The New Zealand government recently adopted an ambitious goal to eradicate introduced rats, stoats, and possums from the country by 2050 at an estimated cost of NZ$5–26 billion [14]. Whether this target can be achieved remains to be seen, but the target's ambition arguably enhances its potential to perform beneficial auxiliary functions. This includes the financial investment, technological advancement, and cross-sector coordination that emerge from target setting (http://pf2050.co.nz). To this end, the New Zealand government will initially invest NZ$28 million in a joint venture to drive coinvestment in predator control and research activities. This approach harnesses the power of an ambitious target to leverage greater support for long-term conservation actions, with benefits likely to extend beyond the stated target, including possibly inspiring others to aim higher [15].

Measuring the progress and impact of conservation targets also leads to the development of new tools and knowledge. Both the CBD's 2010 target and subsequent Aichi Targets instigated the development of a suite of indicators to measure progress against the targets [1,8]. Indicator development was facilitated through the Biodiversity Indicators Partnership, which was established in direct response to the CBD's 2010 target to reduce global biodiversity loss. While many indicators were already in use and were adapted to the format, new indicators were created to fill data gaps [8]. The benefits of developing these indicators also extend to other global policy initiatives such as the SDGs and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). This example of a new partnership dedicated to the development of new tools demonstrates how different auxiliary functions can feed into one another to advance the use of conservation targets (Figure 1).

Concluding Remarks

Given the prevalence of auxiliary functions, the value of conservation targets should not be determined simply on whether their primary objectives are met. Bringing auxiliary functions into focus highlights the multiple roles that targets play in conservation science and policy. This is particularly relevant for the Aichi Targets, as most are unlikely to be met by their 2020 deadline [1].

To capitalize on the benefits of auxiliary functions, target-setting authorities could develop mechanisms for measuring the impact of targets beyond their primary objectives. Some potentially useful indicators relevant to the auxiliary functions already exist, such as online interest in biodiversity and investment in environmental education [1], which could be used to track awareness-raising actions. Investment could also be measured based on funding provided by the Global Environment Fund and other initiatives [1]. However, these indicators relate only to the relative scale of auxiliary functions themselves (e.g., amount of investment, number of new partnerships). Further work is needed to evaluate the extent to which auxiliary functions facilitate progress towards achieving targets and how auxiliary functions can initiate feedbacks to improve future target-based initiatives. By documenting examples of feedbacks between auxiliary functions and targets, we anticipate that many more benefits and feedbacks will be revealed as auxiliary functions are given greater consideration in conservation policy.

While we have emphasized the value of auxiliary functions in target-based

conservation, we stress that these functions should not be a distraction from achieving the primary objectives of targets nor should they be exploited as an 'easy out' to legitimize the failure to meet primary objectives. Because social and political factors shape conservation targets and targets necessarily have social and political effects, we should endeavor to understand and account for such interactions rather than treat them as incidental. Capitalizing on synergies between primary objectives and auxiliary functions has the potential to substantially increase the positive impacts of targets on biodiversity conservation.

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