Development Learning Lab

DLL
Evidence Review

What Works in Environmental Advocacy?

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Abstract

There is little systematized knowledge on whether, and under which conditions, environmental advocacy campaigns are effective in helping balance human wellbeing with environmental goals. This review therefore systematically considers available evidence on the effectiveness of environmental advocacy, focusing particularly on anti-deforestation advocacy. A light-touch systematic review of published scholarly and grey literature was undertaken with the following inclusion criteria: publisher credibility, method credibility, and closeness to the questions and topics of interest. 28 studies were considered directly relevant to the focus on environmental advocacy effectiveness, while 54 studies were of borderline relevance. Most borderline studies did not directly focus on environmental advocacy effectiveness, but included insights on other topics (e.g., the effectiveness of state- or firm-led anti-deforestation interventions) that could hold relevance for environmental advocacy.

Main points

- Evidence for what works in environmental advocacy (including anti-deforestation advocacy) is thin, constraining our ability to understand which advocacy strategies and tactics work best under different conditions.
- On the basis of the existing evidence, however, environmental advocacy appears to be most successful when it is a sustained and multifaceted effort, leveraging specific policy windows and a mix of incentives customized to respond to contextual conditions.
- While funders of research should establish mechanisms that enable the filling of evidence gaps in this area, practitioners can develop theories of change that systematically use existing evidence to better ground environmental advocacy in the dynamic situations of each context in which they work.

1 Introduction

No country has yet achieved very high levels of human wellbeing within their planetary boundaries (Infante-Amate et al 2024). How to simultaneously achieve high human wellbeing *and* environmental sustainability is therefore a vital but open question. Environment-focused non-government organizations (NGOs) frequently advocate for reforms, policies, and interventions, with such advocacy ultimately funded by state budgets. There is, however, little systematized knowledge on whether, and under which conditions, environmental advocacy campaigns are effective in helping balance human wellbeing with environmental goals.

This review understands environmental advocacy as a spectrum of activities to influence public policy, resource allocation, and social attitudes, with a view to protecting and improving the natural environment. It is far from obvious that such advocacy directly leads to policies that help balance human wellbeing with environmental imperatives. Sustainable forest policies, for instance, may emerge due to possibly unrelated drivers, including agricultural intensification, urbanization, industrialization, and increasing resource scarcity. This review therefore systematically considers available evidence on the effectiveness of environmental advocacy, focusing particularly on anti-deforestation advocacy.

2 Research Questions and Methods

This review focuses on two main questions:

> Q1: What works in environmental advocacy?
> Q2: Which combinations of incentives work best in balancing human development and environmental sustainability (particularly deforestation) and should therefore be advocated?

These questions were approached via a light-touch systematic review of published scholarly and grey literature. The criteria for inclusion of studies in the review were: publisher credibility, method credibility, and closeness to the questions and topics of interest.

Combinations of keywords were searched via Google Scholar and Google search engines, limited to publications from the last decade. Search combinations were repeated for two main geographies: tropical rainforest countries (Amazon, Congo Basin, Southeast Asia) and European rainforest donor countries (Norway, Germany, UK). The keywords chosen were *environment*, *rainforest*, *deforestation*, *advocacy*, *campaign*, *pressure*, *grassroots,decisionmaking*, *incent -ive*, *lesson*, and *theory of change*. All possible combinations of these keywords were used to generate search strings repeated for the two sets of geographies. Five pages of hits were reviewed for each search string. Snowballing was used to identify additional studies from the references of relevant studies initially identified via search strings.

A total of 28 studies were considered directly relevant to the focus on environmental advocacy effectiveness, while 54 studies were considered to be of borderline relevance. Most borderline studies did not directly focus on environmental advocacy effectiveness, but rather included insights on other topics (e.g., the effectiveness of state- or firm-led anti-deforestation interventions) that could hold relevance for environmental advocacy. Annex 1 summarizes results from this review, including relevant, borderline, and irrelevant hits. Only studies (both relevant and borderline) cited in the body text of this evidence review are included in the end reference list.

This review categorized studies into the following six main types: (i) meta study, (ii) literature review, (iii) single case study, (iv) comparative study, (v) survey experiments, (vi) online surveys. Meta studies are defined as statistical or qualitative higher-level analyses of a large collection of analysis results from individual studies for the purpose of integrating the findings.[1] Survey experiments are defined as studies with research designs that integrate experimental methods with the generalizability of survey research.[2]

3 Findings

There were no meta studies directly focused on the effectiveness of environmental advocacy or anti-deforestation advocacy. Of those studies considered to be of direct relevance, the majority were single case studies from one country (14 studies). Five studies were systematic literature reviews, two were based on survey experiments, while one was based on an online survey. Six comparative studies were identified as directly relevant, with half of these studies undertaking comparisons across two or more countries.

The main limitations in answering the research questions were therefore: (i) the small number of total studies of direct relevance; (ii) the lack of meta studies of direct relevance, with only meta studies of borderline relevance to environmental advocacy available; and (iii) the small number of comparative studies of direct relevance. Having said this, the methodological diversity of relevant studies meant that they provided insights from various perspectives. Since this review relied on a light-touch systematic approach it is possible some relevant studies may have been missed.

3.1 What works in environmental advocacy?

A systematic global review of literature of direct relevance to the above question is Gaworecki and Tomaselli (2018). This study asked how effective advocacy campaigns are at driving permanent policy change that leads to forest conservation results, focusing on six forest commodities: beef and cattle, biofuels, oil palm, pulp and paper, soy, and timber. Using a systematic approach, this study identified a list of further studies, mainly limited to national and international advocacy campaigns as opposed to grassroots campaigns. Gaworecki and Tomaselli (2018) found no studies that rigorously or experimentally measured the impact of environmental campaigns, and that most studies used perception-based measurements (such as asking people if they thought the campaigns were effective), did not consider counterfactual scenarios (what would have happened if the campaign had not occurred), and were based on case reports that did not use controls or consider confounding variables.

Since they concluded that scientific evidence is weak for any claims about the effectiveness of advocacy campaigns, Gaworecki and Tomaselli also spoke with experts in forest conservation and advocacy campaigns to supplement their understanding. Using this approach, they found that environmental advocacy is so heterogenous, with each campaign employing a mix of tactics tailored to specific situations, that it is almost impossible to examine the totality of environmental advocacy efforts. Additionally, a complicating factor in tracing the contribution of advocacy to environmental policy and practice "wins" is that advocacy campaigns do not operate in a vacuum and are only one of many factors that may influence policy and practice change. Other factors may be norms and rules promoted by inter-

[1] See: Cooper, H., Hedges, L.V. and Valentine, J.C. eds., 2019. *The handbook of research synthesis and meta-analysis*. Russell Sage Foundation.

[2] See: https://www.sciencedirect.com/topics/social-sciences/survey-experiment#:~:text=In%20subject%20area:%20Social%20Sciences,On%20this%20page

governmental bodies, domestic laws and policies, or market pressures from consumers, all of which may be unrelated to advocacy.

More recent studies identified in the present review, however, *did* adopt experimental designs, pointing to further development of the literature since 2018. Simons et al (2025) investigated the effectiveness of strategic psychology-based marketing techniques adopted by non-governmental organizations to increase support for tropical rainforest restoration. Adopting a controlled online experiment with 1166 nationally representative residents of the United Kingdom, they tested whether support increased when adding ecosystem service framings, such as regulation of potentially life-threatening flooding events, to biodiversity-focused messages. The study finds no indication that framings around ecosystem services, rather than nature's intrinsic value, strengthens public support for conservation (note: the study did not assess the effects of biodiversity-focused messages).

A second study, Long et al (2023), conducted an online experiment to investigate how new environmental and public health information affects donations to environmental causes. The study asked 1200 respondents in the United States to state their willingness to donate to conservation organizations some or all of a USD 100 bonus that would be given to two randomly chosen respondents at the end of the experiment. A main finding of this study is that new information may backfire. While new information increased donations among people who already believed that deforestation is a problem, it reduced donations among those who did not hold that belief. The negative effect in the latter group was larger than the positive effect in the former. The authors suggest that this backfiring may occur because people who receive information that contradicts their beliefs feel pressured, or they may become more sceptical because they assume that the information may be false. The study highlights the importance of carefully tailoring messages to target groups and recognizing the potential for unintended consequences.

The most recent systematic literature review of direct relevance was Thomas-Walters et al (2025), who reviewed 50 studies on the impacts of climate activism. Presenting existing evidence of what is known about climate activism and its impacts, they found there is strong evidence that such activism shifts public opinion and media coverage in a pro-climate direction, but that this varies by context and the tactics employed. They also found more moderate evidence that activism can pressure policymakers to communicate more about climate change, encourage voters to vote in a more pro-climate direction, and financially pressure carbon-intensive companies. The authors reviewed, too, suggestive evidence that protests can influence emissions and environmental policy. Thomas-Walters et al noted that the studies they reviewed cover a wide range of outcome variables, and a majority examine intermediate variables. They note too that there is a lack of strong evidence for changes in these intermediary variables leading to policy change that will lead to emission reductions. They point to an ongoing debate that casts doubt on the meaningfulness of shifting public opinion as a means of achieving political change. Evidence from other areas suggests that success is more likely to come instead from focusing on the elite sectors that can force politicians to confront the climate issue (Young and Thomas-Walters 2024). They also noted that the generalizability of their study is challenged by a bias toward the United States and Western Europe. They therefore called for more studies outside these areas, and more attention to activism’s impact on public policy and carbon emissions.

Six studies identified via the present review adopted either within-country or cross-country comparative methods to investigate some aspects of environmental advocacy effectiveness. Ravikumar et al (2018), for instance, investigated poor coordination among land use sectors and among different levels of government as an impediment for reducing deforestation and forest degradation. They did so using interview data from over 500 respondents involved in land use initiatives in Peru, Indonesia, and Mexico. This study found that coordination in itself is not sufficient; there is a need to also pay attention to the

political coalitions that oppose environmental objectives. Those cases where land use initiatives were successful to reduce deforestation typically involved effective coordination among well-informed actors, driven by political organizing over time by activists, local people, non-governmental organizations, and international donors.

Another comparative study (Haddad 2021) investigated which environmental advocacy strategies have been most successful in persuading citizens, governments, and businesses to alter their behaviour in four East Asian countries, namely: China, Japan, South Korea, and Taiwan. The premise of this study is that achieving results via environmental advocacy is particularly challenging in East Asia, since countries in this region have an historic attachment to the developmental state model that is hostile to citizen-based advocacy. The study analysed 200 cases chosen randomly from a pool of 3390 cases of environmental advocacy to investigate whether they had been effective, relying primarily on perceptions data. Environmental organizations across East Asia employed similar advocacy strategies even though they operated in different political contexts, and that the most successful strategies in East Asia were also those most often used in the United States. Public education and networking with other organizations were by far the most common strategies perceived to be successful, while policy papers, partnering with government, and media campaigns were also common. The more overtly political strategies of letter writing, public protests, lobbying, and lawsuits were much less common everywhere. A limitation of this study is that it is mainly based on perceptions data on environmental advocacy effectiveness. However, it does take a critical approach to this data, for instance recognizing the risk that environmental advocates can be used by government officials to promote policy options already favoured by policymakers.

As noted above, Gaworecki and Tomaselli (2018) concluded that environmental advocacy campaigns are so heterogeneous that systematically learning from their totality is nearly impossible. Nonetheless, useful insights on environmental advocacy effectiveness are contained in the fourteen single case studies identified via the present review, several of which adopted a common Advocacy Coalition Framework (ACF) approach to explain environmental policy change over long periods. First articulated in the early 1980s by Paul Sabatier and Hank Jenkins-Smith, the ACF approach is a theoretical model to understand how multiple actors interact in policy subsystems (e.g., environmental policy) and how policy change occurs through internal learning within or between advocacy coalitions, or via external changes (e.g., in political leadership).[3]

Ruysschaert and Hufty (2020), for instance, adopted the ACF model to investigate a conservation success case in Indonesia. Focused on the non-governmental campaign from 2004 to 2017 to protect the coastal Tripa peat swamp rainforest in Aceh, Sumatra, this study sought to understand the enabling factors that led this campaign to succeed in persuading the state to cancel an oil palm plantation permit and impose heavy fines and prison terms on plantation managers and owners. The study identified four enabling conditions of the NGO campaign in question: (i) its ability to sustain action over a decade and navigate external changes (e.g., changes in governors, post-tsunami reconstruction); (ii) its ability to learn from past failures marked by the evolution of core policy beliefs; (iii) its ability to take opportunities and act quickly when changes occurred; and (iv) its ability to closely monitor and disseminate knowledge (e.g., about deforestation) to guide its behaviour.

[3] See: Sabatier, P.A., 1998. "The advocacy coalition framework: revisions and relevance for Europe". *Journal of European public policy*, *5*(1), pp.98-130.

3.2 Which combinations of incentives work best in balancing human development and environmental sustainability (particularly deforestation) and should therefore be advocated?

A separate, though related, question as to whether environmental or anti-deforestation advocacy is effective, is which combinations of incentives work best in balancing human development and environmental sustainability and should therefore be advocated. For this question, the present review identified two meta studies (Busch and Ferretti-Gallon 2017, Niel et al 2019) and one literature review as being of some relevance (Seymour and Harris 2019). Other studies of some relevance to the question of which incentives work best were a comparative study on supply chain anti-deforestation initiatives (Meijer 2015) and a systematic literature review on the broader economics of tropical deforestation (Balboni et al 2023). None of these studies directly address environmental advocacy effectiveness as part of their analysis of incentives, however, so were categorized as being of borderline relevance overall.

Busch and Ferretti-Gallon (2017) conducted a meta study of what drives deforestation and what stops it, based on a database of 121 econometric studies of deforestation published in peer-reviewed journals from 1993 to 2013. On this basis, they found that a range of approaches and incentives hold promise for stopping deforestation: (i) reducing the expansion of road networks into remote forested areas, (ii) targeting protected areas in regions where forests face a greater threat, (iii) and insulating the forest frontier from the demand for agricultural commodities. They also found preliminary evidence that enforcing forest protection laws, supporting forest management by Indigenous Peoples, and payments for ecosystem services (PES) may also stop deforestation.

Noting mixed results from similar studies on the effectiveness of anti-deforestation policies, Niel et al (2019) implemented a mapping of the theories of change underpinning such policies, using 264 empirical studies. This approach shed light on the causal steps needed for anti-deforestation policies to be effective and enabled the observation of previous blind spots in the literature. They found that the effectiveness of anti-deforestation policies is context-specific on political, economic, social, cultural, environmental, and structural dimensions. Key aspects capable of influencing effectiveness were identified as: political willingness; the nature of funding; governance structures; the existence of forest-related traditions; the social and economic situation of local populations; and the nature and scale of deforestation drivers. Niel et al also found that the success or failure of anti-deforestation policies mostly lies in effective implementation in the field, i.e., the ability to generate social acceptance and compliance. They also found that displacement of, or no change to, deforestation can occur even if policies are successfully accepted, if the policy in question nonetheless does not properly address deforestation drivers.

Seymour and Harris (2019) showed via a literature review that the drivers of deforestation are complex and can rapidly change. They found, therefore, that a range of policies (and a mix of incentives) customized to particular contexts is needed to address deforestation effectively. They illustrated this by comparing the drivers of forest loss in the Brazilian Amazon, Congo Basin, and Indonesia, noting how these have changed over time. For example, they showed that in Indonesia expansion of industrial plantations had by 2016 become less significant a driver than small-scale farming. Seymour and Harris additionally showed that although the interventions needed to stop deforestation drivers are often clear, strategies for prompting political action to undertake these interventions can still prove elusive. For example, they pointed out that prominent anti-deforestation initiatives (such as Reducing Emissions from Deforestation and Forest Degradation under the United Nations Framework Convention on Climate Change) rest on the unproven assumption that access to finance and markets will motivate political action against deforestation. The study concluded that financial and market incentives must be augmented by

increased public awareness of the benefits of forests so that tropical forest protection becomes a viable political proposition for elected officials.

Meijer (2015) compared the effectiveness of supply chain initiatives to reduce deforestation. For the overall societal result of reduced deforestation to be achieved (i.e., impact effectiveness), Meijer notes behavioural change is required of the actors that currently deforest (i.e., outcome effectiveness). Supply chain initiatives aim to influence this behavioural change through setting targets with regard to reducing deforestation (i.e., output effectiveness). The aim of this study was to understand whether supply chain initiatives can influence the behaviour of companies in relation to deforestation, with the focus therefore on outcome and output effectiveness. The study analyses four supply chain initiatives in two countries: the Roundtable on Sustainable Palm Oil in Indonesia and the Roundtable on Responsible Soy, the Soy Moratorium and the Cattle Agreement in Brazil. The first two are certification schemes intended to incentivize more sustainable production, while the last two are moratoria under which certain actors no longer purchased from companies that engaged in deforestation after a certain date. The study found that in term of output effectiveness, moratoria were more effective in developing ambitious standards to reduce deforestation than certification schemes. At the outcome level, compliance with voluntary criteria seemed to be relatively high under the two moratoria in comparison with the certification schemes. The study noted that the moratoria benefitted from a concentration of power among actors risking loss of customers and able to demand changes in behaviour from their suppliers. On the other hand, certification schemes of multistakeholder initiatives were viewed as being based on consensus and found to have lower requirements for reducing deforestation. Meijer et al found that, for all initiatives, a risk of leakage – deforestation by others, for other purposes, or elsewhere – remained.

Balboni et al (2023) provided a framework for systematically reviewing the fast-growing empirical literature on the economics of deforestation in the tropics. One section of the study, in particular, addressed the question of whether and to what extent policies work in practice to reduce the negative externalities of tropical deforestation (Section 4.2.2.). The policies covered by this review were: payments for ecosystem services (PES); protected areas; Coasean bargaining; trade policy; non-state interventions. Balboni et al (2023) found, overall, that implementing policies to address deforestation at scale is difficult. They noted that there is a growing literature on PES that considers how to organize these payments, but still much to learn about which schemes work, how they can be scaled up, and how to implement them over long periods. They also found that PES transfers and environmental taxes have important equity and anti-poverty considerations that have not yet been thoroughly explored. Enforcement of forest-related regulations was found to be a challenge, with more research needed to understand how to enforce effectively, particularly in contexts with limited state capacity. Another key evidence gap identified was how to change the incentives of politicians and officials in favour of forest conservation. This included how to improve understanding of how politicians and officials are captured via corruption and lobbying by those who wish to convert forests.

4 Conclusions and Recommendations

The evidence for what works in environmental advocacy (including anti-deforestation advocacy) is currently thin, constraining our ability to understand which advocacy strategies and tactics work best under different conditions. Meta studies explicitly focused on environmental advocacy are lacking, with the evidence base consisting of a relatively small number of systematic reviews of literature, comparative studies, single case studies, and a smaller number of survey experiments and online surveys. This area of

knowledge would benefit from a stronger evidence base, particularly from meta studies, as well as contribution analyses, focused on the effects of environmental advocacy.

On the basis of the existing evidence reviewed here, however, environmental advocacy appears to be most successful when it is a sustained and multifaceted effort, leveraging specific policy windows and a mix of incentives customized to respond to contextual conditions. While funders of research should establish mechanisms that enable the filling of evidence gaps in this area, practitioners can develop theories of change that systematically use existing evidence to better ground environmental advocacy in the dynamic situations of each context in which they work.

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Annexes

Annex 1: Matrix of Literature Surveyed