



Does international climate finance contribute to the adoption of zero deforestation policies? Insights from Brazil and Indonesia[☆]

Heiner von Lüpke^{a,*}, Bence Mármárosi^b, Charlotte Aebischer^b, Egor Trushin^b,
Martha Bolaños^b, Thomas Webb^b, Eros Nascimento^c, Djoko Suroso^d, Gustavo Breviglieri^e

^a Thünen Institute of Forestry, Germany

^b German Institute for Economic Research (DIW Berlin), Germany

^c Universidade Estadual de Montes Claros, Brazil

^d Institut Teknologi Bandung, Indonesia

^e Fundação Getúlio Vargas, Brazil

ARTICLE INFO

Keywords:

International climate finance
Official development assistance
Policy adoption
LULUCF
Brazil
Indonesia

ABSTRACT

International climate finance (ICF) is a critical mechanism for reducing deforestation and supporting global climate cooperation, yet its effectiveness is often questioned on account of scale and implementation challenges. This paper addresses the question whether ICF, implemented through Official Development Assistance (ODA), is catalysing policy adoption in the land use, land use change, and forestry (LULUCF) sectors of Brazil and Indonesia and henceforth contributes to global climate cooperation. We deploy a novel analytical framework, which assesses the role of ICF in transnational policy processes, and analyse how international and domestic factors influence its effectiveness in supporting LULUCF policy adoption. We find that ICF actors are caught in a dilemma between stated objectives of policy reform and ambitious transformational change while at the same time have their legitimacy questioned as participants in domestic policy processes. Ultimately, political access to decision making spheres on policy adoption for climate and land use are denied to them. In Brazil, competing coalitions debate the implementation of the national forest law, while in Indonesia, ICF is confined to technocratic policy spheres, leaving critical decisions to the political economy sphere. Our findings suggest that for ICF to be effective in catalysing policy adoption and global cooperation, it must address legitimacy concerns through political dialogue and shift from ODA approaches towards equitable cooperation, which involves donors' policy efforts as well. To be politically attractive, better alignment of ICF with national development objectives is also crucial, which could take the form of just transition for climate and land use.

1. Introduction

Despite decades of effort, the land use, land use change and forestry (LULUCF) sectors continue to contribute significantly to global greenhouse gas (GHG) emissions, accounting for 22 % of global emissions in 2019 (IPCC, 2023). Consequently, policy measures concerning forests and other natural ecosystems are of great significance, with the reduction of deforestation offering the largest potential to reduce GHG emissions in the sector (ibid). Countries with extensive forested regions are increasingly under scrutiny from the international community to protect these ecosystems. In Brazil and Indonesia, prominent LULUCF policies such as the Brazilian Forest Code and the Indonesian FOLU

(Forestry and other land use) Net Sink 2030 policy target are subject to wide-ranging international interests.

The protection and sustainable management of forests of Brazil and Indonesia is considered a classic example of a global public good, as the benefits in terms of avoided GHG emissions and biodiversity conservation are accruing to the global population as a whole (Boonen et al., 2019). At the same time, there are economic gains from the conversion of forests to other uses such as soy and cattle in Brazil, or palm oil or mining in Indonesia. Hence, forests are caught between the interests of global actors advocating for conservation and sustainable management on one side, and domestic economic and social development forces on the other (Pokorný et al., 2019). In the tradition of Westphalian states –

[☆] This article is part of a Special issue entitled: 'Climate & forest governance' published in Forest Policy and Economics.

* Corresponding author.

E-mail address: heiner.vonluepke@thuenen.de (H. von Lüpke).

emphasising national sovereignty over international public affairs –, and to protect national economic interests and development objectives, countries design policies which furthers nation-centric interests and leave global public goods in a marginal role (Damodaran, 2010). International cooperation, however, is often invoked as a potential remedy to the conflict of domestic and international interest in managing forests (La Vina and De Leon, 2014).

In comparison to the magnitude of financial flows, that are contributing to deforestation, the amounts of finance which are spent for the protection of forests globally still falls drastically short (Brockhaus et al. (2024)). Within the landscape of the latter type of finance, the share of market-based and new, innovative forms of finance increased in recent years (ibid), but bilateral climate finance has been highlighted as a potential facilitator of positive change in domestic governance structures and public policies (Pokorný et al., 2019). Such ‘catalytic cooperation’ occurs when climate finance contributes to a shift in governmental actors’ “preferences and strategies toward cooperative outcomes over time” (Hale, 2020, p. 1). Furthermore, congruence between international mitigation objectives and broader national goals, such as poverty reduction or development, is proposed to stimulate deeper climate action (Garibaldi et al., 2014). Thus, ICF could encourage global forest protection by advancing the international climate cooperation necessary for the provision of global public goods. However, this largely depends on whether ICF is accepted and seen as legitimate in recipient countries (Pokorný et al., 2019). To test such propositions, it is crucial to analyse the interplay between international support and domestic policy processes and assess if outcomes of such processes lead to enhanced cooperation on climate and reduced deforestation. We argue that the current way of implementing ICF leads to impasses and that better ways for ICF design exist when aligning more with theories on how countries cooperate under the Paris Agreement.

Against this background, our study is guided by the following research questions:

- *Does international climate finance (ICF) promote climate policy adoption in the area of LULUCF in Brazil and Indonesia, and what roles do ICF actors play in the domestic policy processes?*
- *Are ICF actors seen as legitimate intervenors in domestic policy processes, and do these processes contribute to enhanced global climate cooperation?*

To address these questions, we developed a theoretical framework for ICF in the context of international climate cooperation. Our methodology operationalizes this via a novel analytical framework for transnational policy processes. The remainder of the article proceeds as follows: first, the research design and methods are presented, then the empirical findings of our cases, followed by a discussion of the results. Policy recommendations and limitations of the research design are subsequently provided.

2. Theoretical framework

In this section, we are presenting two theoretical threads: (1) ICF as promoter of global cooperation on climate and zero deforestation; (2) ICF implemented through ODA to foster adoption of climate and zero deforestation policies.

2.1. ICF as promoter of global cooperation on climate and zero deforestation

To solve complex problems of climate change and deforestation, global cooperation and domestic action is needed alike (Ostrom, 2010). According to the Paris Agreement, individual parties contribute through their nationally determined contributions (NDCs) and national zero deforestation targets to the collective global goal of staying below 1.5 degrees global warming. Hence, we define international climate cooperation in the forest and land use sectors as the sum of individual nations

making contributions to a global collective goal. In accordance with article 9 of the Paris Agreement (UNFCCC, 2016), ICF is an instrument for such cooperation as its objective is to assist developing countries with respect to their obligations under the UNFCCC. In fact, developing countries usually make contributions to mitigation in the forest and land use sectors contingent on the availability of international support (Pauw et al., 2020).

Literature in the context of such global cooperation includes, among others, the study of effectiveness of international regimes (e.g., Kleinschmit et al., 2024), pathways of influence (Bernstein and Cashore, 2012), and, on more detailed levels, studies on the effectiveness of official development assistance (ODA) to foster cooperation (Rahman and Giessen, 2017). Within this complex field, we are focusing on pathways of influence as this allows us to study how states react to international influences and processes such as the provision of ICF, which are triggering domestic policy responses in regards to the management of climate and forests within their national territories (Bernstein and Cashore, 2012; Jodoin, 2017). These international influences can be due to international rules, norms and discourse, markets and incentives in the form of finance, technology and capacity building (Bernstein and Cashore, 2012). Other scholars have described the political nature of interactions between funders and recipients (Rahman and Giessen, 2017). This conceptualization of a transnational process, shedding light onto both principal parties involved, is particularly important when framing the challenge at hand as a global public goods problem. It introduces an important element to the conceptualization of international support: That donors engage with domestic policy processes for political motives. According to our concept, such transnational policy processes are a transmission line for global cooperation, and policy adoption is an indicator that countries are contributing to global collective goods preservation.

The empirical literature on interaction effects of international and national factors on domestic policies remains inconclusive. For instance, on the one hand, for results based finance (REDD+) to be an effective agent for policy change, the presence of already initiated policy change in combination with powerful transformational coalitions and strong ownership and leadership is necessary to lead to transformative outcomes for addressing deforestation and climate change (Korhonen-Kurki et al., 2019). On the other hand, Rahman and Giessen (2017) have found in Bangladesh’s forest and climate policies that international funders exerted influence over national policy processes using informational, incentive and coercion approaches. These studies examine the effects of international projects in the country where they are implemented, but not the mutuality of cooperation - considering the funder’s political agency - and the interactional effects between funders and recipients as a determinant for the quality of global cooperation outcomes.

To further improve our understanding of what conditions countries need in order to cooperate for the protection of global public goods such as forests and climate, a revisiting of literature on the governance of commons is useful.

Nagendra and Ostrom (2012) suggest that strong decentralisation – the delegation of management to the lowest level possible – is a key element for sustainable forest management and climate protection. The authors suggest this on the basis of multiple case studies involving the complexity of managing sustainably forested landscapes, and using the lens of polycentric governance for their analysis. This implies that no single blueprint solution exists, but rather local conditions, situation-specific roles, and interplay of actors determine success (ibid). They furthermore postulate that the rules of the game need to be institutionalised, and trust between all parties involved should be established in order to improve programme effectiveness, and that “the impact of power inequities [should be] minimised during negotiations, so that the opinions of the least powerful stakeholders [are] also taken into consideration rather than mandating top-down processes of ‘knowledge transfer’” (Nagendra and Ostrom, 2012: 109).

What we can conclude from such studies is that there is a dichotomy

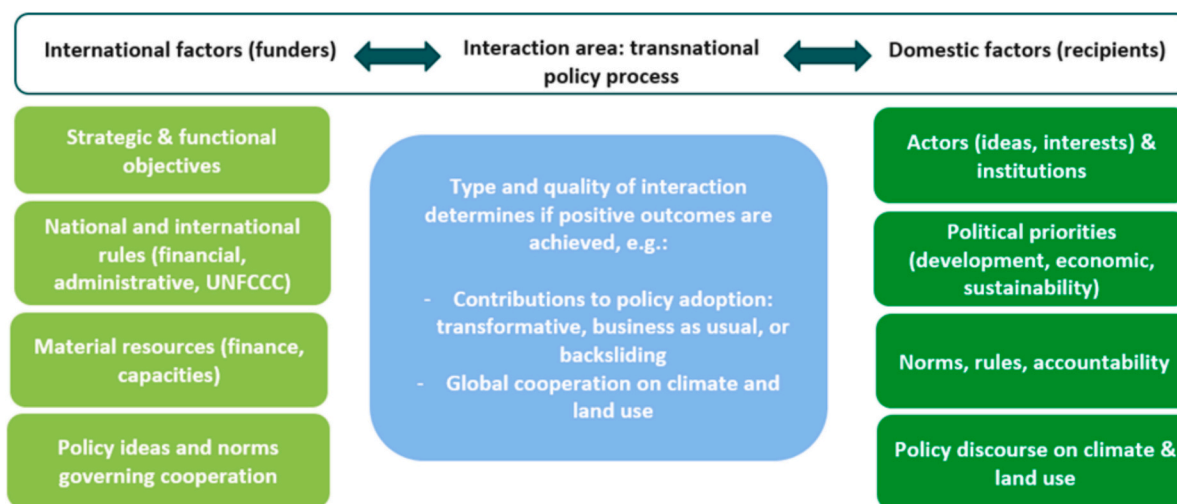


Fig. 1. Analytical framework displaying interactions between international and domestic factors and resulting effects on policy adoption. Source: Authors' own contribution, based on Bernstein and Cashore (2012), Brockhaus et al. (2021), Jodoin (2017).

between the needs for localised solutions for forest management - based on local conditions, specific interplays of actors and creation of locally appropriate institutions - and the internationally driven programmes in the context of international climate finance. This is a dichotomy insofar as international actors engaged in the design of such programmes lack the specific knowledge and experience of the local conditions, and importantly, have unclear mandates, agency and legitimacy to engage in national policy processes that drive transformational change for sustainable land use in recipient countries (Diprose et al., 2019).

Another common theory of global cooperation in the climate commons postulates that reciprocity is of paramount importance as a precondition for making national contributions to a global collective goal (Nordhaus, 2015). In other words, countries make contributions to global climate and deforestation targets contingent on contributions by other countries in order to avoid freerider behaviour. Translated to our context, this would imply that recipient countries would demand domestic policy actions from funder countries as well. According to such theories, funders would have to include themselves in the design of cooperation, without which, limited motivation to adopt ambitious climate and deforestation policies could be expected from recipient governments.

The gap we identify in the literature is related to the question under which conditions international influences become acceptable in domestic policy processes. In other words: Under which circumstances can a transnational policy process be institutionalised, such that outcomes of such processes are perceived legitimate by local and international stakeholders in the process?

Considering the above, we formulate two hypotheses:

Hypothesis 1. Financial and technical contributions in the form of international climate finance constitute an important factor for the adoption of national deforestation and climate policies and hence, to global cooperation in an equitable manner.

Hypothesis 2. The adoption of reforms to national deforestation and climate policies promoted or influenced by ICF may be undermined by

concerns related to sovereignty and the perceived legitimacy of external influence.

2.2. ICF implemented through ODA to foster adoption of climate and zero deforestation policies

Our second theoretical thread builds on the traditional challenges that ODA¹ faces, and which are expected to reappear, if not aggravate, if this mode of implementation is used for ICF as well. In fact, about 30 % of the overall goal of 100 bn USD per year according to article 9 of the Paris Agreement is administered through bilateral, public ODA during the years 2020–2021 (OECD, 2023; Watson et al., 2025).

ODA is often criticised for displaying competing priorities, conditions that limit recipient ownership, and over-dominating donor interests (Mitchell et al., 2021; Hattle and Nordbo, 2022; von Lüpke et al., 2023b). These issues, inherent in the design of ODA, are especially problematic given that the guidance for effective ICF design highlights the central role of policy reforms by recipient countries as an important element of theories of change (Harikishun, 2023; Matthys et al., 2023). According to Angelsen's example of REDD+ (2017), these issues become aggravated if conditionality of finance and associated attempts of superimposing foreign agendas upon domestic policy processes are practised.

The fact that ICF for LULUCF mainly takes the form of ODA raises additional questions to be addressed in the case studies. For instance, Collier (1997) and Easterly (2006) suggest that foreign aid traditionally: i) fails to account for (cultural and social) context-specificity of each country; ii) does not allow for adjustments as context changes; iii) is often imposed externally, in top-down fashion, with insufficient or non-existing ownership from recipients; iv) lacks incentives structures that encourage policy reforms, often creating perverse incentives and aid-dependency; and v) needs better accountability, with more robust monitoring and evaluation mechanisms that ensure funds are used for the intended goals.

Critical accounts of the role of foreign aid on recipient countries'

¹ ODA is a category used by the Development Assistance Committee (DAC) of the OECD to measure government aid transferred from developed countries to developing countries for the explicit purpose of supporting their economic development (Griffiths, 2018). The ODA system is built around several key principles: ownership by recipient countries over the use of finance, alignment of funders' and recipients country systems, and coordination of funders' programs (OECD, 2011).

institutions are also found elsewhere, most prominently in Deaton (2013), who argues that ODA reduces accountability from local governments to their citizens and undermines the incentives for the pursuit of broader reforms and, consequently, the will to achieve sustainable development. In this sense, we also seek to evaluate if similar limitations are found for the specific case of climate aid.

Elaborating on this point, Brunner and Ekoko (2000) focus on the influence of structural adjustment lending from the World Bank on forest policy reform in Cameroon. Their research shows that conditionalities do not lead to long-term reforms, and that effective policy implementation requires reforms outside of the forest sector. However, importantly for our case studies, most ICF for LULUCF does not take the form of lending, and is more often happening via provision of technical assistance. Thus, the hypothesis below is yet to be fully addressed.

Hypothesis 3. The limitations of Official Development Assistance (ODA), as observed for other goals, also hinder the effectiveness of reforms in deforestation and climate policies, and in its course, also hinder contributions by countries to global climate cooperation and the achievement of international climate goals.

3. Analytical framework

Our analytical framework seeks to analyse how international and domestic factors influence the operation and effectiveness of ICF actors in supporting the adoption of LULUCF policies in Brazil and Indonesia (Fig. 1). We assume that the ability of ICF projects to catalyse international climate cooperation depends on its interaction with the domestic policy context. This policy context is determined by country-specific actors and institutions, norms and regulations, as well as a political economy environment unique to the LULUCF sector (Brockhaus et al., 2021). In particular the latter point can be an important factor, if for instance rent seeking through deforestation influences policy adoption (ibid).

Through this analytical framework we are focusing on three elements in particular, which we derived from the theory section above:

- (1) **Agency of ICF in LULUCF policy processes.** The aim is to describe how ICF is positioned in LULUCF policy processes in Brazil and Indonesia. This includes a description of the objectives of ICF projects, how they relate to national policy objectives, and how the methods and resources deployed by ICF actors connect to those applied by domestic policy actors. We are qualitatively describing how ICF and domestic policy actors view each other in terms of influence on policy decisions, legitimacy, and whether cooperative relationships between the two exist and what effects such relationships have.
- (2) **Interactions between funders and recipients as components of a transnational policy process.** To explore how ICF engages with a recipient country, we conceptualise an interaction area between international and national factors (Bernstein and Cashore, 2012; Jodoin, 2017). We assume that international factors influence domestic policy processes through four key avenues: functional and strategic objective; policy ideas and norms governing cooperation; international and national rules; and resources provision (finance, capacity development). This results in the ‘interaction area’ or, in other words, in a transnational policy process. In this process, international actors use their resources and strategies to achieve their goals while operating within the constraints of the socioeconomic context and institutions of recipient countries. The broader political context in and around the LULUCF sectors is also significant. Key for consideration in this regard is the competition between coalitions for and against proposed forestry policy changes. Being able to navigate such conflicts between competing coalitions is crucial for a policy’s successful implementation (Sabatier and Weible, 2019).

Table 1

Analytical elements and questions for the analysis of interaction processes leading up to policy adoption forms.

Analytical elements	Diagnostic questions
Role of ICF in domestic policy processes	Does ICF play a role in domestic LULUCF policy processes, and if so, what? What should the role ideally be? Do strategic objectives of funders and recipients meet?
Transnational policy process and contribution of ICF to international climate cooperation	Is LULUCF policy a matter of national sovereignty or a global public good? Is ICF contributing to global cooperation, and if so, how? Are there issues of ICF related to foreign influence and infringements on national sovereignty?
ICF contributes to policy adoption in LULUCF	Under what conditions do domestic policy actors adopt policies and accept policy influences by donor funded projects?

Source: Authors’ own contribution.

- (3) **Policy adoption in climate and land use as possible outcomes of transnational policy processes.** Many factors influence the adoption of a policy, which has been defined as the process of agreement and passage of a new policy by relevant institutions of government so that the selected policy option is put into effect” (International Organization for Migration, 2023). According to the literature, climate policy adoption is driven by domestic and international factors (Fankhauser et al., 2014). The type of benefit which is generated by the climate policy (global or local), the focus of the policy (mitigation or adaptation) and the level of public support are all significant factors explaining climate policy adoption (Yeganeh et al., 2020). We suggest that policy adoption as an outcome variable could have one of three states (see Fig. 1):

- Transformative policy adoption: progressive climate policies are not only adopted as a national priority but also implemented on a large scale over extended periods of time.
- Business as usual (BAU) policy adoption: no change of status quo, leading to implementation with little to no impact.
- Backsliding policy adoption: reduced or no adoption and implementation of climate policies.

We examined what kind of interactions between national and international factors lead to a particular type of policy adoption. The context of our research is that broader policy goals have been set, but the specific instruments that determine the actual course of implementation have not yet been decided on.

To decide which of the three types of policy adoption is likely to be the result of these interactions, we developed the analytical elements and questions contained in Table 1.

4. Research design, methods, and data

Indonesia and Brazil were selected due to certain key similarities. First of all, both countries are characterised by extensive forested regions, making them critical players in global efforts to combat deforestation. They also share common challenges related to land-use practices, such as deforestation, peatland degradation, and agricultural expansion, with significant implications for GHG emissions. Both have been recipients of significant flows of bilateral public climate finance, and, as large emerging economies, are facing the same challenge of balancing economic development with environmental conservation.

Despite these similarities, significant variation remains between the countries, such as in the government’s political orientations, policy processes, and strategies to curb deforestation. This made a strict

Table 2
Overview of interviewees per actor group.

Actor group	Abbreviation	Brazil	Indonesia
National policy actors	govt	6	7
Non-governmental organization, policy advocacy groups, international organisations	NGO	3	2
Academia and think tanks	academia	6	5
Technical cooperation actors	TC	7	6
Financial cooperation actors / funder	FC	2	3
Private sector	PS	3	2
Total		27	25

Source: Authors' own contribution.

comparison between cases unfeasible. Instead, the cases were contrasted through a side-by-side examination. While this limits the rigour of the analysis, it helps to illuminate key similarities and differences between the cases, allowing for conceptual learning when variation occurs systematically across problem features (Bego et al., 2023).

Both case studies are primarily based on interview data, combined with background desk research. For Brazil and Indonesia, 27 and 25 stakeholders were interviewed respectively. The professions of the interviewees, along with a count of how many were interviewed from each group, can be found in Table 2. Research in Brazil was conducted first, with the findings used to guide our approach in Indonesia, following a replication logic to multiple-case studies (Yin, 2018, p. 91).

The selection of the interviewees was based on the results of the literature review and the relevant stakeholder mapping, which we conducted in the area of national LULUCF policy adoption processes of Indonesia and Brazil. The interviews were semi-structured, with a set of 5 guiding questions shared with the interviewees in advance. Interviews lasted between 60 and 90 min, and the exact questions were formulated in accordance with the specific area of expertise of the interviewee. A detailed operationalization is available in the Annex.

The transcribed interviews are used as raw data to find descriptive and explanatory patterns through an iterative process (DeCuir-Gunby et al., 2011). The analysis of established patterns is used to build answers to the research questions. For instance, if various interviewees from different actor groups explain that under certain conditions, ICF is supportive for a policy adoption process, then this was counted as mounting evidence and eventually formed part of the explanatory patterns presented in the results section.

We focus on German-funded ICF projects in particular, including technical cooperation (TC), and to a lesser extent, financial cooperation (FC). This is because per OECD DAC data of 2005–2021, Germany is the 1st and 2nd biggest contributor to the LULUCF sector in Brazil and Indonesia respectively. We focus our analysis mostly on the current time span of 2018–2023, but use information on historical cases from Brazil and Indonesia to provide additional insights.

5. Results

In this section we present results from the two case studies of Indonesia and Brazil. Each case is presented based on the elements of the analytical framework: First, we provide background information on the domestic setting of LULUCF in the country. Second, we present the overall weighting of factors, which determine the adoption of LULUCF policies in Brazil and Indonesia. Third, we zoom in on ICF as a factor and show how ICF interacts with the domestic LULUCF policy processes. Lastly, we provide a case conclusion.

5.1. Indonesia

Indonesia has the eighth largest forest cover globally, with 92,133,000 ha (FAO, 2020). Deforestation rates in Indonesia have dropped to record lows since a peak in 2016 and were at approximately

Table 3
Overview of grant and Green Book projects, 2010–2023.

Funder	Number of projects	Receiver	Share of projects with intended policy change output
Germany	6	Ministries for environment, Forestry and development	4/6 67 %
World Bank	4	planning	4/4 100 %
GEF/UNDP	3		1/3 33 %
JICA	2		1/2 50 %
Other (EU, France, Korea)	3		1/3 33 %
Total:	18		11/18 61 %

Source: Authors' own contribution.

107,000 ha loss of primary forests in 2022 (Global Forest Watch, 2025). Indonesia is currently the sixth largest carbon dioxide emitter, largely driven by land use change and its fleet of coal power stations (Climate Transparency, 2022).

5.1.1. Domestic policy context

The institutional setting of Indonesia's national LULUCF policy field is dominated by ministries and related agencies. The country has established a net zero deforestation target, the FOLU Net Sink 2030, which falls under the jurisdiction of the Ministry of Environment and Forestry (KLHK). The key political priorities in the LULUCF sectors are economic growth, investments, infrastructure development, and agricultural commodity developments (GoI, 2020; Climate Action Tracker, 2021). The resulting government decisions act as drivers for deforestation, while simultaneously lowering climate priorities (Di Gregorio, 2022). Current political strategies for sustainable land management and reducing deforestation include the prevention of forest fires, peat land management, and net zero deforestation targets (Republic of Indonesia, 2022).

According to most interviewees, these strategies rank low compared to other priorities, and implementation of related policies is weak (see also 5.1.2. below). The government's aim to both sustain economic growth and achieve climate targets is an often-contradictory exercise (ex-govt), as illustrated by the challenges of trying to integrate policies to address drivers of deforestation on the one hand, and those to stimulate investments into nickel mining on the other hand. Mining activities are promoted by government policies to develop electric vehicles, which have resulted in a massive expansion of nickel mining and triggered deforestation of almost 25,000 ha from 2002 to 2022 (Pandu, 2023). In 2022, foreign direct investment in Indonesia reached 43 billion USD, from which 16 billion USD were directed to mining. In comparison, the budget ceiling of KLHK in 2022 was 2.2 billion USD.

The policy processes in Indonesia's LULUCF sector are strongly influenced by the executive branch of the government (Sudirman, 2023). Examples include the extensive presidential regulations such as the logging moratorium and NDC. Furthermore, the current policy system stems from a period of state-led development paradigms (Leftwich, 1995), which is nowadays reflected in the role of the Ministry of National Development Planning (BAPPENAS) to prepare medium to long-term plans as a basis for policy making by sectoral ministries. Interviewees have described this policy system as highly "technocratic", with limited effectiveness. Regulations regarding implementation are often incomplete or ambiguous. Cross-sectoral integration is too weak to address drivers of deforestation in adjacent policy fields such as agriculture, mining, or infrastructure (NGO, TC, govt).

5.1.2. Agency of ICF in Indonesian LULUCF policy processes

When we zoom into the portfolio of ICF, projects are closely connected to the executive branch of the government, where they are typically supporting middle levels of ministries and agencies with capacity building measures, studies, policy recommendations, and pilot projects.

Most of these projects have an explicit intention to affect policy adoption. A content analysis of planned projects financed by grants or external loans (“Green Book”) shows that funders are very likely to focus their financial or technical cooperation on policy areas in order to achieve policy change (Table 3). Implemented mainly in cooperation with KLHK and BAPPENAS, 11 projects out of 18 had a scope of intending to affect policy, suggesting that donor countries want ICF to lead to transformative policy adoption.

To coordinate ODA funds, BAPPENAS’ directorates of bilateral and multilateral development funding participate in government-to-government negotiations and consult with sectoral ministries about ODA support needs. ICF projects are generally directed towards the technocratic policy space, where they are allocated to support the ‘technocratic policy processes’, to address lacking capacities, budgets, and gaps in planning and policy frameworks (govt, NGO, academia). This space of the technocratic policy process was described by an interviewee (NGO) as the “comfort zone” of interactions between donors and government, in which sustainable development objectives are pursued, but without much impact on the political economy of land use (govt, NGO). One interviewee (academia) described this political economy sphere as “the national carbon space”, in which decisions are taken about licensing for land use such as forest conversion for mining. This space was described as being off-limits for international actors, and generally confined to an exclusive group of actors from government and private sector.

The interactions between international actors, which are funded via ICF, and domestic policy actors in the Indonesian land use and climate field were broadly characterised by interviewees in two ways. For one side, projects were esteemed for capacity building services, and regarded as almost an integral part of the institutional landscape, despite their transnational characteristics (govt, TC). In such institutional settings, individual trust between Indonesian policy actors and foreign funded project staff is of high importance and their role is one of a mediator between often diverging goals and interests between funders and recipients (TC).

For another side, these actors also buffer tensions and sensitivities which arise due to the perceived foreign agendas, which are transported via the inflow of ICF. According to interviewees, the language and diplomatic style which is used to negotiate and agree on goals of such cooperation are much more based on partnership principles, but in “many minds of international funders and advisors, ideas of transformations and policy reforms prevail, which are not well communicated with Indonesian counterparts” (TC). Such a rather one-sided focus of ICF on the situation of the Indonesian land use-climate policies was not well received by some interviewees who suggested that “funders should consider their own NDC progress when they push for NDC implementation in Indonesia” (govt, TC). Such statements allude to the validity of reciprocity of policy actions as a condition for domestic actions to address climate change. When asked whether funders should reform their own climate and land use policies as well as a basis for providing ICF, it was generally stated that this would be fair but challenging in terms of operationalization, according to donor interviewees.

Generally however, reasons related to differing interpretations of goals of cooperation, diverging interests between funders and Indonesian government in terms of changing, or not changing, the political economy of land use as well as outsider roles to the domestic policy processes lead to lacking legitimization of ICF actors in such a transnational policy process.

Table 4

Factors for policy adoption in Indonesia’s land use and climate policy processes.

Category	Factor for policy adoption
Most relevant factors	Political vision of the president and objectives which cater to his constituency Contributing to economic growth and development Responses to private sector interests, including those which can increase the inflow of investments Natural events and disaster risk management (e.g., record forest fires in 2015 triggered policy action and enforcement)
Factors of lesser relevance (in declining order)	Pressure from domestic civil society and domestic and international NGOs International agreements and negotiations on climate change and forests Ambition to show global leadership in climate action and join the OECD
Controversial factor	Trade related policies, e.g., EU regulation on deforestation-free products. Causing strong reactions such as identifying alternative markets and alliance building with like-minded countries.
Irrelevant factor	ICF (including results-based finance of REDD+) as an influence on political decision making

For potential EUDR impacts, see also Zhunusova et al. (2022).

5.1.3. Overall weighting of factors influencing LULUCF policy adoption

Within the general policy and political economy context presented above, we were interested in understanding what contextual factors matter for the adoption of policies in the LULUCF sectors of Indonesia. The following factors were mentioned by interviewees, which we grouped into four categories (Table 4).

The above listed factors point clearly to the importance of the national economy and development. Interviewees from all stakeholder groups confirmed this. As this weighting of factors shows, interviewees denied the relevance of ICF as a factor for LULUCF policy adoption. In the next part, we present our analysis of why this should be the case.

5.1.4. Obstacles to ICF as a factor for policy adoption

The directions and limitations set by the technocratic policy system push ICF into a paradoxical situation where the government asks for support from ICF actors to improve policy making only in low priority, ‘comfort zone’ areas. Simultaneously, the government puts strict boundaries on high priority areas such as those around the political economy sphere. This leads to contradictory policies or symbolic policy making in different policy areas, such as setting targets for the FOLU Net Sink in 2030, with unclear terms of implementation of the policy. This is critical, as the drivers of deforestation extend to the political economy space integration strategies with the FOLU net sink target.

The majority of interviewees considered the potential for ICF to influence policy decision-making as “very sensitive” and “against the ethos of ODA”. Interviewees from the ODA stakeholder group (TC) highlighted “assistance or positive contributions” to policy processes, in particular to implementation. Government interviewees (govt, FC) suggested that ICF projects are not an influencing factor because “national policy decisions are matters of national sovereignty”. Interviewees from all stakeholder groups confirmed that this trend of emphasising national sovereignty has been increasing since the commencement of President Jokowi’s term in 2014. Non-state interviewees (NGO, academia), however, expressed views that these government positions are rather geared towards the general public, whilst behind closed doors inputs from ICF are considered and possibly acted upon. The incongruity of ICF for catalytic cooperation coupled with strong technocratic policy environment in Indonesia leads to business-as-usual policy adoption, which steers ICF into the “comfort zone” (Fig. 2).

5.1.5. Case conclusion

In conclusion, three issues emerge. The first is whether the expectations around ICF outcomes are aligned. The Indonesian government

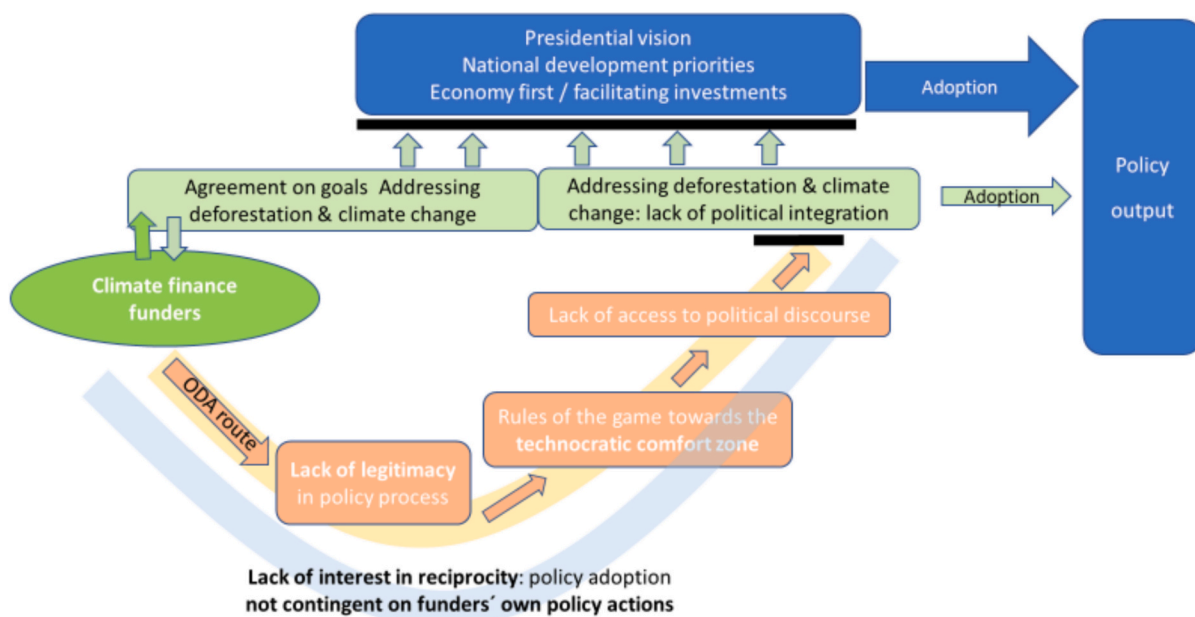


Fig. 2. Climate finance is channelled via the ODA route and faces barriers (orange) that prevent a role as factor for policy adoption.

places a high political priority on growth and development objectives, while climate targets are of lower priority and only weakly supported through policies. The tension between prioritising global or national public goods is high. On the other hand, donor countries want ICF to lead to transformative policy adoption. There is a lack of agenda integration between growth, development, and climate, with no visible attempts to bridge between the technocratic and political economy policy spaces in LULUCF. A more successful ICF approach may seek to revisit its expectations and instead focus on generating co-benefits around economic growth and development.

The second issue relates to the role of ICF in policy processes. At present they occupy an ambiguous role, not able, despite the high-level agreement between donor and Indonesia, to strongly push for greater climate policies. They are not publicly recognised as a legitimate actor by the Indonesian government, yet they provide advice and support to the implementation of policies. In light of that, the interaction area in its current form produces ‘business as usual policy adoption’.

The third issue relates to the equality of cooperation: owing to the nature of ODA principles and norms there is an exclusive focus on the Indonesian policy situation in LULUCF. However, there is a real need to make cooperation more mutual, for example through the inclusion of the funder’s domestic policy situation into any accountability mechanisms. This was highlighted in several of the interviews, by questioning why NDC ambition should be raised in Indonesia, if the funder’s own NDC is not concerned. This was also raised by a funder (“You cannot ask partners to reform without reforming domestically.”), but it was acknowledged that the political structure in the funder’s country does not allow it to factor in domestic policy frameworks.

5.2. Brazil

Brazil has the second largest forest cover world-wide, standing at 496,619,600 ha (FAO, 2020). Since the mid-1990s, the mean deforestation rate has been around 20.000 km² (Silva Junior et al., 2021). Since a record low in 2012, deforestation rates have risen to a 15-year record in 2023, but dropped significantly since mid-2023 (Araujo and Frontini, 2023). Largely driven by this deforestation, Brazil now ranks as the twelfth largest GHG emitter (Joint Research Centre, 2022).

Brazil’s geopolitical position in the world stage is inseparably bound to biomes such as the Amazon. For some observers, this is due to the

international importance of these regions in the global climate, especially as they reach catastrophic tipping points (Harvey, 2022). For others, the region is defined by its potential for economic development, due to the abundance of mineral resources and potential for agro-industrial development - both of which are significant drivers for deforestation (Alves et al., 2009).

5.2.1. Domestic policy context

The primary legal instrument in the fight against deforestation in Brazil is the Forest Code (Brock et al., 2021). Its implementation relies on the Rural Environmental Registry (CAR) which registers, analyses and validates the forest-related properties in Brazil (Chiavari et al., 2021). However, insecure land tenure and weak property rights in the Amazon region remain a significant problem: i) most illegal deforestation happens in public lands; ii) local and federal governments have previously granted land titles with little concerns for past behaviour from occupiers; and as a result, iii) the illegal expansion of farming area remains cheaper than the restoration of degraded pastures (FGVces, 2022).

The Brazilian political system strongly mediates the country’s willingness to protect forests. A multiparty system forces the federal executive branch to form coalitions with a wide spectrum of political parties to win a majority in Congress (Abranches, 1988, 2018). This gives the legislature a strong role within the existing coalition presidentialism, often forcing the government to negotiate with political parties of different ideologies. This can be seen in the case of the Forest Code with the strength of the rural caucus in Congress. The rural caucus represents agri-businesses and mining interests which prioritise private land ownership over conservation areas and environmental regulations (Munch, 2019). We find two main development discourses with differing visions for the implementation of the Forest Code. They are grouped in two coalitions:

- (1) more progressive, developmental, and focused on local development with zero deforestation by 2030. (“Strict implementation”)
- (2) more conservative, nationalist, and focused on expanding land use for the agribusiness (“Weak implementation”)

The substantial powers from the executive branch are somewhat balanced by the significant power held by the legislative branch

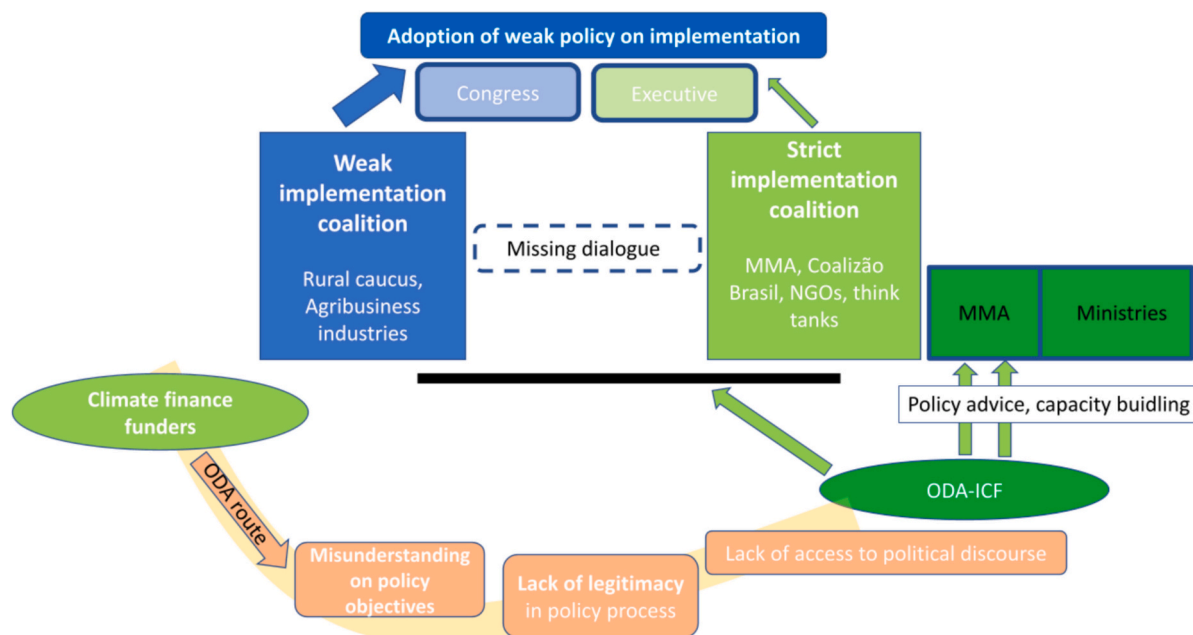


Fig. 3. Results of the Brazilian case study: ICF actors support MMA, but are not participating in the coalition struggle. (Source: Authors' own contribution)

Table 5
Overview of ODA projects in the forestry sector in Brazil, counterpart MMA, 2010–2023.

Funder	Number of projects	Share of projects with intended policy change output	
Germany	15	11/15	73 %
UK	1	1/1	100 %
World Bank	7	6/7	86 %
GEF	6	5/6	83 %
Total:	29	23/29	86 %

Source: Authors' own contribution.

(Hochstetler, 2021). Indeed, Presidents are unable to force through their vision of forest management - instead they must negotiate with a range of parties in Congress to see legislation successfully passed (see key constellation of actors in Fig. 3). In other words, the executive branch depends much on the legislative arm of Brazil in order to govern forests and climate, which has important implications for the functioning of ICF.

5.2.2. Agency of ICF in Brazilian LULUCF policy processes

In Brazil, the forestry and agriculture sectors are among the largest recipients of ODA-based climate finance. German ICF has the largest share within the overall donor portfolio of Brazil and a longstanding history of cooperation with Brazil's Ministry of Environment (MMA) (Table 5). The topics and broad objectives of cooperation are agreed in high level negotiations between funders and Brazilian government representatives, and detailed project descriptions containing ODA-based impact logics are produced subsequently. Remarkably, a share of 86 % of internationally funded projects pursues goals of policy change (see Table 5), making the question particularly relevant, whether ICF is a factor for policy adoption and which roles are played in the policy process, respectively.

The projects are guided by individual steering committees, in which the main political counterpart, for instance, a high-ranking government official from the MMA, takes the lead. These pilot projects are intended to demonstrate to policy makers that new sustainable pathways are possible, with the ultimate goal of moving these topics higher up the

political agenda. Many sustainability topics are marginalised on political agendas, for both funder and recipient countries (interviewee TC).

ICF primarily engages with the coalition for 'strict implementation' of the Forest code, composed of ICF actors, MMA, NGOs, MAPA (Ministry of Agriculture, Livestock and Food Supply). This coalition is losing against the lobbying forces of the 'weak implementation' coalition, composed of actors such as the rural caucus and the broader agribusiness lobby. The strict implementation coalition is largely located in the executive branch; the weak implementation coalition around Congress. An example of the strength of the weak implementation coalition was seen in January 2023. The newly elected government brought forward a draft bill about the structure of government, which needed to be ratified by Congress. The rural caucus agreed on the condition that the environmental rural registry (CAR) was moved to the Ministry of Planning and Innovation. Moving the CAR was understood as a weakening of Forest Code implementation, as it reduced the policy to a technical reporting tool and disconnected it from more substantive policy implementation by MMA and MAPA (ex-govt, academia). It is in these political processes, where the courses for policy implementation are set, and where ICF has no role to play. This stands in remarkable contrast to the general ICF objective to induce policy changes.

On the contrary, all government officials state in interviews that the purpose of ICF is to support policy implementation (govt). An interviewee (TT) stated a big challenge consists in overcoming silo structures of production and conservation communities in congress and beyond and to create an integrated narrative, which incorporates many different actors and blended strategies. For that to happen, strict government to government would have to become more flexible and support non-state actors as well, who can be agile and politically astute. Currently, interviewees from TT and NGOs think there is a vacuum, when it comes to the influences of international actors, as far as political decisions are taken.

National sovereignty over domestic policy processes in LULUCF is a challenge for ICF actors (govt., TC, NGOs). Not all approaches are permissible for ICF, e.g., policy work on operational levels with directors in ministries are acceptable, whilst access to political decision-making processes is not. However, the line after which national sovereignty over policy decisions becomes a concern is blurry. A few other aspects are worthwhile highlighting.

Table 6

Categories and factors for policy adoption in Brazil's land use and forest sectors. (Source: own elaboration).

Category	Factor for policy adoption
Most relevant factors	Bolsonaro era (2019-2022): nationalistic style of policymaking, catering to economic activities of Brazil's agribusiness.
Factors of lesser relevance (in declining order)	Lula era (since 2023): development paradigm and international agenda of increased importance
	Trade developments due to Brazil's reliance on exports
	International processes e.g. UNFCCC (Governmental reputation)
	Advocacy work of NGOs
Controversial factor	Availability of green finance (private investors)
	National sustainability concerns
	EUDR causes strong negative reactions among policymakers
Irrelevant factor	ICF (government seeks mere technical and financial assistance for implementation, ODA views political influence as inappropriate)

Firstly, the performance of ICF projects is highly dependent on top-level political decisions in Brazil: when the top-level agenda promotes reducing deforestation, then the performance of a TC portfolio can be very high (Lula administrations I, 2003–2007 and II, 2007–2011). If the importance of such topics is downgraded (Bolsonaro, 2018–2022), then the projects cannot develop to their full potential (interviewee TC, NGO).

Secondly, some interviewees emphasised that Brazil should be the lead on decision-making (TC, govt), rather than funders, who are not always tightly connected to the realities of the policy processes in Brazil (interviewee TC). Relatedly, the need for mutuality of cooperation is an important issue for Brazil as domestic policy actors feel criticised for lagging policy implementation (“if funders offer support for capacity building and policy advice, it means we are starting from a relatively low baseline”). Some interviewees perceive donor countries to be hypocritical as they often fail to honour their own commitments to mitigate climate change.

Thirdly, funders and recipients have differing visions of the use of TCs - recipients see TCs as vital to supplement scarce resources of implementation (govt), whilst funding agencies typically seek to restrict projects to advisory and capacity building roles to influence policy (interviewee TC).

5.2.3. ICF as a factor for policy adoption?

5.2.4. Overall weighting of factors influencing policy adoption

In this section, we provide an overview of the findings on how Brazil reacts to national international factors in the context of policy adoption for climate and land use (Table 6). We explore the Brazilian public sector's response within the context of the Forest Code, based on interview findings.

The ranking of factors in Table 6 is remarkably clear: the most important factors influencing policy decisions relate to domestic political, economic and developmental aspects, whilst ICF is not acknowledged by interviewees regardless of institutional affiliation. The latter ambiguity between project objectives to induce policy changes and the real-life denial of its role as a factor for policy adoption can be explained by the lacking legitimacy of ICF actors in real-life policy processes of Brazil.

The Brazilian case centres on the political conflict in Congress over the terms of implementation of the Forest Code. ICF actors have become part of the policy process through engagement with the executive branch of government, and in that capacity form part of a coalition that advocates ‘strict implementation’ of the Code. The opposing coalition focuses on the rural caucus within Congress, who are able to block such legislation.

The prominence of the political economy of land-use, strongly

represented by the rural caucus, is again displayed - considerations of ICF actors are easy to sideline in face of organised and determined private lobbying efforts by agribusiness. Furthermore, ICF are strongly bound by their principals (Governments of Brazil and Funder) to the MMA, and their potential role as an actor in the competition of coalitions is blocked because such a role is considered illegitimate. The result of these coalition interactions is a business-as-usual policy adoption type, characterised by a dominant coalition for weaker implementation of the Forest Code with marginal impacts incurring in this process by ICF (Fig. 3).

There is another issue which is emerging in regards to the assigned role for ICF to strictly support the implementation of policies in the LULUCF sector of Brazil, given the real political struggle over the terms of implementation of regulations and policies. In other words, implementation and political decision making cannot be separated as in the binary perspective on “policy processes are inaccessible” and “support for implementation”.

The early Lula administrations in Brazil showed, however, that it is possible to temporarily overcome political economy dynamics to reduce deforestation (Pires et al., 2016). As we have learned from interviews (TC, govt), success factors were the clarification of terms and means of policy implementation, as well as an open invitation to, and legitimization and recognition of, ICF support. This highlights again the importance of clarifying and legitimising the role of ICF in the policy process (TC, govt). These were reinforced by the administration's expectations of strong economic performance, which enabled them to focus on other key issues.

Yet the challenge is not just a difference in priorities between ICF and a national government willing, but unable, to adopt transformational terms of implementation for the Forest Code. Here the distinction between global and national public goods re-emerges. There is a distinction between the objectives of ICF actors (global, climate) and the Brazilian federal government objectives (national, development). This misalignment of expectations and priorities drives some of the ineffectiveness of ODA - it does not directly address the key priorities of the recipient country.

Concerns around sovereignty also feature. Designating the Amazon biome, for example, as a global public good can be interpreted to imply a weakening of Brazil's governance of the region, which is deeply problematic for the national government. In this situation, ICF is operating more at the international level but is not effectively tapping into the intra-national level, where negotiations actually occur. Even when a Brazilian ministry agrees to ICF cooperation it may not represent country ownership of the climate agenda, but rather the support of a minor constituency in a broader coalitional struggle over the adoption of climate policies.

The case study shows that it is mostly factors related to domestic economic development that matter for the type of policy adopted, while ICF is not acknowledged as an influential factor. The strict alignment of ICF with the executive branch is a limiting factor to its effectiveness in such volatile political situations. Furthermore, ICF could align more with the local development objectives of Brazil, as well as being designed in a more equitable manner between funders and recipients in order to enhance effectiveness.

6. Discussion and policy recommendations

This paper addressed the question of which role ICF plays for the adoption of LULUCF related policies in Indonesia and Brazil, and in a wider sense, whether the implementation of ICF can contribute as a perceived legitimate mechanism to international climate cooperation in forestry and land use. For that, we developed and applied a novel analytical framework to study the interaction effects of funders and recipients in domestic policy processes.

In regards to the first question, we found that domestic factors are the most important in driving the adoption, or non-adoption, of climate

mitigation policies, while ICF actors have little impact on the likelihood of transformative adoption. Within the domestic factors, political economy considerations were the most significant, with lobbies representing palm oil, mining and infrastructure investment in Indonesia and agribusiness in Brazil being able to influence the direction of policy decisions. This creates a challenging political environment for ICF actors to navigate.

Returning to our initial hypotheses, the case studies defy [hypothesis 1](#), suggesting that ICF is not a crucial factor for transformative policy adoption in the LULUCF sector, either limited to comfortable technocratic processes or just a part of broader coalitions for policy change/implantation, but less relevant than domestic factors, such as the promotion of economic growth. The cases provide strong support to [hypothesis 2](#), in that concerns about national sovereignty and the legitimacy of external influence prevail in regards to the engagement of ICF actors in domestic policy processes. Finally, we can confirm [Hypothesis 3](#), as the utilisation of ODA principles for the disbursement of ICF leads to similar impasses as for related other goals, thereby endangering important goals of international cooperation to address climate change and deforestation.

From our analysis, three main issues emerge, which prevent effective cooperation to address climate change and deforestation: (1) institutionalisation and legitimacy; (2) lack of connection between climate and development priorities; and (3) reciprocity of cooperation. These issues have ramifications with broader topics of climate, forests, and development and will be discussed accordingly.

6.1. Ineffective cooperation spaces: Institutionalisation and legitimacy of international actors

With objectives related to transformational change and policy reforms, cooperation in the context of ICF would require significantly higher degrees of institutionalisation of a transnational policy process and legitimacy as a policy actor therein. On the contrary, our results show that ICF is questioned for its legitimacy as a policy actor in the policy processes and important venues of political decision making are closed to them.

We assume that this lack of legitimacy is due to at least two reasons. First, the general distance between policy ideas which are brought into the policy process by international actors and those which are more rooted in the local circumstances and context. While this is not necessarily a challenge with policy ideas implying marginal changes (many interviewees praised the technical capacities of ICF actors), it becomes an issue if policy ideas are concerned with transformational changes. In such situations, legitimacy is questioned and access to important policy venues closed.

Second, there seems to be a misunderstanding between funders and recipients on the general objectives of ICF. While funders see ICF as a means to support transformational change and policy reforms, recipients have the opinion that ICF is meant to support policy implementation through technical and financial means in a way which is disconnected from political decision-making processes on the terms of policy implementation. However, the cases show that this separation does not occur in reality and greater dialogue on the role of ICF actors is needed for clarification and possibly convergence.

We therefore recommend that more dialogues should be held that have the objective to recognise or eliminate a quasi-political role of ICF. When the terms of policy implementation are unclear or disputed, ICF actors are contested in the domestic policy processes. To avoid becoming an illegitimate transnational policy actor would require an unambiguous political decision of funders and recipients. This is especially relevant since transformation processes are usually contested, leading to political struggles over the course and speed of transitions, or whether there should be a transition at all ([Kreinin, 2020](#)). Transparent dialogues between key national stakeholders and ICF could help to assuage legitimacy concerns.

6.2. Lacking connections between climate and development priorities in cooperation

Related to the first issue, there seems to be a mismatch between the offer ICF actors present and the needs that policy makers must address, thus undermining the capacity of cooperation to encourage transformative climate action ([Hale, 2020](#)). Funders prioritise climate mitigation and reducing deforestation, while domestic policy actors prioritise national socio-economic development goals and are challenged by the political economy context in the land use sectors. It seems that remedying diverging priorities is not commonly practised, even though the problem is well documented and affects the effectiveness of climate finance. This was clearly highlighted by an interviewee from the funder side “When push comes to shove, funders will always prioritise climate as the main goal of cooperation.”

A further aspect to consider is the importance of social justice and equity goals. According to our findings, policymakers seek to attract investment, build infrastructure and secure socio-economic development, alongside reducing poverty. As prior research has shown for energy sector transitions in the global south, political leaders struggle to commit to global goals, unless domestic development priorities are met and social justice and equity dimensions are adequately considered in the transition plans ([Bouille, 2023](#)). Unfortunately, domestic social justice aspects are often underrepresented in ICF packages ([von Lüpke et al., 2023a](#)).

We recommend that ICF aiming to address deforestation ought to balance development and climate goals. Global benefits and national benefits can be viewed like sides of a seesaw, balancing on a fulcrum. If only global benefits are supported, then national drivers and needs are likely not met, rendering ICF politically infeasible as a cooperation model. For these reasons, making stronger connections between climate finance, development, and social justice dimensions, as in the case of just energy transition partnerships, can also be recommended in the land use sector. This can serve the purpose of linking climate, land use and social justice agendas, but also help gain more political traction.

6.3. Reciprocity of cooperation: lack of inclusion of funder's domestic policies

The third issue we address concerns our initial definition of global cooperation as mutual contributions to the protection of global goods, climate, and forests by both funders and recipients. We hold that it should become imperative that funders include their own policy processes into the cooperation. This is the overall proposition: If the ambition level of cooperation objectives and domestic policy goals and plans is shared on both sides, there will be less concerns of unduly influence-seeking, and in its course, also less questioning of legitimacy of international policy actors. In this sense, the ODA model of implementation with its unidirectional focus on improving recipient's policy frameworks seems rather limited to fostering global cooperation in an equitable way, in particular, if the funders do not follow suit with their own policy adjustments.

If ICF actors are to be legitimised, and a transnational policy process is to be institutionalised in policy processes of recipient countries, then reciprocity has to be an option for funder countries.²

We suggest that ICF should move beyond ODA and towards designs that foster global cooperation on climate and deforestation. The lack of reciprocity in ICF was critically perceived by domestic stakeholders in both cases researched. To address this imbalance, we suggest moving away from the traditional conception of ODA as a unidirectional transfer of support. In its place we recommend a more equitable model that

² This notion of reciprocity is however not to be understood as the economic reciprocity argument of collective action theories ([Nordhaus, 2015](#); [Bernauer, 2016](#)), but rather denotes claims for justice and equity of climate action.

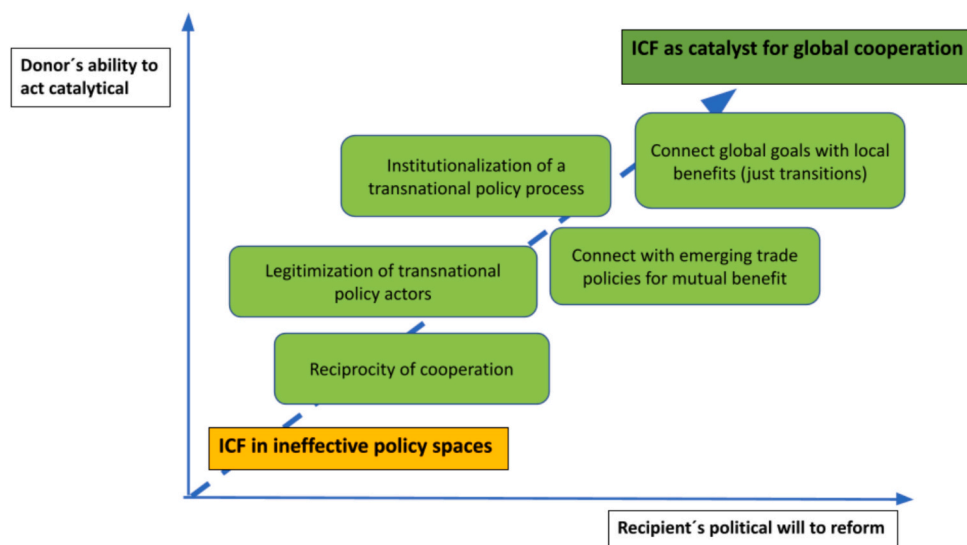


Fig. 4. Proposed factors for the reform of ICF towards ICF as a catalyst for global cooperation to address climate change and deforestation.

would emphasise the active roles of funders and recipients in securing successful cooperation. This could include the coupling of finance provision by funders with domestic policy progress and the recognition of needs for climate and development priorities in ICF proposals. The latter could also include the mobilisation of investments which pursue such dual objectives.

Furthermore, we urge decision makers in the context of novel initiatives such as Brazil's 2022 proposal for the Tropical Forests Forever Fund to incorporate design principles which aim at fostering global cooperation. This can potentially alleviate many of the criticisms and challenges which traditional ODA approaches face.

Synthesising our findings from this research, we propose factors to better structure cooperation efforts in the LULUCF sector such that ICF can act catalytical (Fig. 4).

6.4. Research limitations and future research

To manage the complexities of the case studies, we had to focus on actors in the land use sector related to the interface of climate, forests, and agriculture, while leaving out other important related activities such as mining or infrastructure. Political economy factors, in particular the role of economic interests by actors, which can stand at odds with decisions on transformational policy adoption were clearly identified in Indonesia, but to a lesser degree in Brazil. Future research could investigate this question in particular: what role do informal and oftentimes clandestine political economy factors play *visa vis* international finance and support in favour of transformational policy adoption? Given the novel nature of researching roles and agency of ICF in domestic policy processes, we preferred to select only two cases, which we analysed in-depth, with the downside of producing very case-specific results for countries that are essential players on the topic of deforestation, but are probably less dependent on foreign aid than other countries. This trade-off of external validity against reliability is common to case studies (Yin, 2018). To address this, we encourage scholars to undertake future research on the design of ICF in more cases which lead to global cooperation and hence moving beyond the existing ODA system which is used for the majority of climate finance flows. In particular to explore avenues to enhance reciprocity of cooperation: Should, and if so, how, can funders' own forest and climate policies be integrated better? Could this lead to enhanced legitimacy of international policy actors in domestic policy processes? What lessons can be drawn from novel cooperation forms which connect global public goods protection and local social justice agendas for the land use change and forestry sectors?

CRediT authorship contribution statement

Heiner von Lüpke: Writing – original draft, Methodology, Data curation, Conceptualization. **Bence Mármárosi:** Writing – review & editing, Writing – original draft. **Charlotte Aebischer:** Writing – original draft. **Egor Trushin:** Project administration, Data curation. **Martha Bolaños:** Data curation. **Thomas Webb:** Writing – original draft. **Eros Nascimento:** Writing – review & editing, Writing – original draft, Investigation, Data curation, Conceptualization. **Djoko Suroso:** Writing – review & editing. **Gustavo Breviglieri:** Writing – review & editing, Data curation, Conceptualization.

Declaration of competing interest

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.

Acknowledgements

The authors appreciate the support during the research phase by the team of the Climate Change Center of Institut Teknologi Bandung, Indonesia, and Camila Yamahaki from the Fundação Getulio Vargas, Brazil. Constructive comments by two anonymous reviewers are greatly appreciated and so is Lorenz von Lüpke for his editing work.

This work was funded by the International Climate Initiative (IKI), of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection.

Data availability

The data that has been used is confidential.

References

- Abranches, S., 1988. *Presidencialismo de coalizão: o dilema institucional brasileiro*. Dados: Revista de Ciências Sociais, Rio de Janeiro. IUPERJ 31 (1), 3–55.
- Abranches, S., 2018. *Presidencialismo de coalizão: raízes e evolução Do Modelo político Brasileiro*. Editora Companhia das Letras.
- Alves, D.S., et al., 2009. The changing rates and patterns of deforestation and land use in Brazilian Amazonia.
- Araujo, G., Frontini, P., 2023. Deforestation in Brazil's Amazon falls 66% in August. Reuters, 6 September. Available at: <https://www.reuters.com/business/environment/deforestation-brazils-amazon-falls-70-august-2023-09-05/>. (Accessed 6 October 2023).

- Bego, C.R., Chastain, R.J., DeCaro, M.S., 2023. Designing novel activities before instruction: use of contrasting cases and a rich dataset. *Br. J. Educ. Psychol.* 93 (1), 299–317. Available at: <https://doi.org/10.1111/bjep.12555>.
- Bernstein, S., Cashore, B., 2012. Complex global governance and domestic policies: four pathways of influence. *Int. Aff.* 88 (3), 585–604. Available at: <https://doi.org/10.1111/j.1468-2346.2012.01090.x>.
- Boonen, C., Brando, N., Cogolati, S., Hagen, R., Vanstappen, N., Wouters, J., 2019. Governing as commons or as global public goods: two tales of power. *Int. J. Commons* 13 (1), 553–577. <https://www.jstor.org/stable/26632732>.
- Boulle, M., 2023. The Role of the Just Energy Transition Partnership in Contributing to the Implementation of South Africa's NDC: A New Form of Climate Finance and International Cooperation? South Africa.
- Brock, R.C., et al., 2021. Implementing Brazil's Forest code: a vital contribution to securing forests and conserving biodiversity. *Biodivers. Conserv.* 30 (6), 1621–1635. Available at: <https://doi.org/10.1007/s10531-021-02159-x>.
- Brockhaus, M., Di Gregorio, M., Djoudi, H., et al., 2021. The forest frontier in the global south: climate change policies and the promise of development and equity. *Ambio* 50, 2238–2255. <https://doi.org/10.1007/s13280-021-01602-1>.
- Brockhaus, M., Obeng-Odoom, F., Wong, G., Ali, S., Atmadja, S., Ehrlichmann, H., Varrkey, H., 2024. The Forest-related finance landscape and potential for just investments. In: *International Forest Governance: A Critical Review of Trends, Drawbacks, and New Approaches. A Global Assessment Report. The International Union of Forest Research Organizations (IUFRO)*, pp. 57–81.
- Brunner, J., Ekoko, F., 2000. Cameroon. In: Seymour, F.J., Dubash, N.K. (Eds.), *The Right Conditions*. World Resource Institute, Washington, DC, pp. 59–77.
- Chiavari, J., Lopes, C.L., Araujo, J.N. de, 2021. Where Does Brazil Stand with the Implementation of the Forest Code? A Snapshot of the CAR and PRA in Brazilian States. Climate Policy Initiative, Rio de Janeiro.
- Climate Action Tracker, 2021. Indonesia. Climate Action Tracker.
- Climate Transparency, 2022. Indonesia - Climate Transparency Report: Comparing G20 Climate Action 2022. Climate Transparency.
- Collier, P., 1997. The failure of conditionality. In: Gwin, C., Nelson, J. (Eds.), *Perspectives on Aid and Development*. Washington, DC, Overseas Development Council.
- Damodaran, A., 2010. Encircling the seamless: India, climate change, and the global commons. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198066750.001.0001>. Available at:
- Deaton, A., 2013. *The Great Escape: Health, Wealth, and the Origins of Inequality*. Princeton University Press. <https://doi.org/10.2307/j.ctt3fgxb>.
- DeCuir-Gunby, J.T., Marshall, P.L., Mcculloch, Allison W., 2011. Developing and using a codebook for the analysis of interview data: an example from a professional development research project. *Field Methods* 23 (2), 136–155.
- Di Gregorio, M., 2022. The politics of climate policy integration and land use in Indonesia. In: Marquardt, J., Delina, L.L., Smits, M. (Eds.), *Governing Climate Change in Southeast Asia: Critical Perspectives*. Routledge, Taylor & Francis Group, London New York, NY. <https://doi.org/10.4324/97880429324680> (Routledge advances in climate change research). Available at:
- Diprose, R., Kurniawan, N.I., Macdonald, K., 2019. Transnational policy influence and the politics of legitimization. *Governance* 32, 223–240. <https://doi.org/10.1111/gove.12370>.
- Easterly, W., 2006. *The White Man+S Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. Penguin Press, New York. March 2006.
- Fankhauser, S., Gennaioli, C., Collins, M., 2014. Domestic dynamics and international influence: what explains the passage of climate change legislation? *SSRN Electron. J.* <https://doi.org/10.2139/ssrn.2430107> [Preprint]. Available at:
- FAO, 2020. Extent of forest and other wooded land, Global Forest Resources Assessment 2020. Available at: <https://fra-data.fao.org/assessments/fra/2020/WO/sections/extentOfForest>. (Accessed 6 October 2023).
- FGVces, 2022. Net Zero Political Economy Briefs: Brazil Case-Study. Fundação Getulio Vargas Center for Sustainability Studies, São Paulo, SP, p. 39.
- Garibaldi, J.A., et al., 2014. Comparative analysis of five case studies: commonalities and differences in approaches to mitigation actions in five developing countries. *Clim. Dev.* 6 (sup1), 59–70. Available at: <https://doi.org/10.1080/17565529.2013.812031>.
- Global Forest Watch, 2025. Indonesia Deforestation Rates & Statistics | GFW. Available at: <https://www.globalforestwatch.org/dashboards/country/IDN?category=undefined>. (Accessed 6 October 2023).
- Government of Indonesia (GOI), 2020. 2020–2024 National Medium-Term Development Plan. <https://setkab.go.id/en/govt-issues-regulation-on-2020-2024-national-medium-term-development-plan/>.
- Hale, T., 2020. Catalytic cooperation. *Global Environ. Polit.* 20 (4), 73–98. Available at: https://doi.org/10.1162/glep_a.00561.
- Harikishun, A., 2023. Overview of the theory of change approach. In: EAC NBF workshop, Climate & Development Knowledge Network, 18 April.
- Harvey, C., 2022. Amazon Rain Forest Nears Dangerous Tipping Points, Scientific American. Available at: <https://www.scientificamerican.com/article/amazon-rain-forest-nears-dangerous-tipping-point/>. (Accessed 16 June 2023).
- Hattle, A., Nordbo, J., 2022. That's Not New Money: Assessing how Much Public Climate Finance Has Been “New and Additional” to Support for Development. CARE Denmark, Copenhagen.
- International Organization for Migration, 2023. Stage 5: Policy Adoption | EMM2. Available at: <https://emm.iom.int/handbooks/stage-5-policy-adoption#introduction>. Accessed: 1 December 2023.
- IPCC, 2023. Sections. In: Core Writing Team, Lee, H., Romero, J. (Eds.), *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. IPCC, Geneva, Switzerland, pp. 35–115. <https://doi.org/10.59327/IPCC/AR6-9789291691647>.
- Jodoin, S., 2017. The transnational policy process for REDD+ and domestic policy entrepreneurship in developing countries. *Environ. Plann. C: Polit. Space* 35 (8), 1418–1436. Available at: <https://doi.org/10.1177/2399654417719287>.
- Joint Research Centre (2022) CO2 Emissions of all World Countries: JRC/IEA/PBL 2022 Report. LU: Publications Office. Available at: <https://doi.org/10.2760/730164> (Accessed: 13 June 2023).
- Kleinschmit, D., Wildburger, C., Grima, N., Fisher, B. (Eds.), 2024. *International Forest Governance: A Critical Review of Trends, Drawbacks, and New Approaches*. IUFRO World Series Volume 43, Vienna, p. 164.
- Korhonen-Kurki, K., et al., 2019. What drives policy change for REDD+? A qualitative comparative analysis of the interplay between institutional and policy arena factors. *Clim. Pol.* 19 (3), 315–328.
- Krein, H., 2020. Typologies of “Just Transitions”: Towards Social-Ecological Transformation. In: WU Vienna University of Economics and Business. *Ecological Economic Papers* No. 35.
- La Vina, A., De Leon, A., 2014. Two global challenges, one solution: international cooperation to combat climate change and tropical deforestation. *SSRN Electron. J.* <https://doi.org/10.2139/ssrn.2622767> [Preprint]. Available at:
- Leftwich, A., 1995. Bringing politics back in: towards a model of the developmental state. *J. Dev. Stud.* 31 (3), 400–427. Available at: <https://doi.org/10.1080/00220389508422370>.
- Matthys, F., Coussement, W., De Paepe, G., 2023. More Effective Delivery of Climate Action in Developing Countries. OECD/DAC, Paris.
- Mitchell, I., Ritchie, E., Tahmasebi, A., 2021. Is Climate Finance Towards \$100 Billion “New and Additional”? Center for Global Development, Washington, D.C.
- Munch, P., 2019. “Brazil’s Uncertain Future: President Jair Bolsonaro on Indigenous Rights, Environmental Conservation, and NGOs. Food Tank, 16 August. Available at: <https://foodtank.com/news/2019/08/brazils-uncertain-future-president-jair-bolsonaro-on-indigenous-rights-environmental-conservation-and-ngos/>. (Accessed 20 December 2023).
- Nagendra, H., Ostrom, E., 2012. Polycentric governance of multifunctional forested landscapes. *Int. J. Commons* 6 (2), 104–133.
- Nordhaus, W., 2015. Climate clubs: overcoming free-riding in international climate policy. *Am. Econ. Rev.* 105 (4), 1339–1370.
- OECD, 2023. Climate-related official development assistance in 2021: A snapshot. Available at: <https://www.oecd.org/dac/climate-related-official-development-assistance.pdf>. Accessed: 22 May 2023.
- Ostrom, E., 2010. Polycentric systems for coping with collective action and global environmental change. *Glob. Environ. Chang.* 20 (4), 550–557.
- Pandu, P., 2023. Ekspansi Pertambangan Nikel Picu Deforestasi Seluas 25.000 Hektar, kompas.id. Available at: <https://www.kompas.id/baca/humaniora/2023/07/13/ekspansi-pertambangan-nikel-picu-deforestasi-seluas-25000-hektar>. (Accessed 6 October 2023).
- Pauw, W.P., Castro, P., Pickering, J., Bhasin, S., 2020. Conditional nationally determined contributions in the Paris agreement: foothold for equity or Achilles heel? *Clim. Pol.* 20 (4), 468–484.
- Pires, M., et al., 2016. Brazil: Implementing Prevention and Control Policies for Reducing Deforestation. Global Good Practice Analysis on LEDS, NAMAs and MRV. www.miti-gationpartnership.net/gpa.
- Pokorny, B., et al., 2019. Forests as a Global Commons: International Governance and the Role of Germany. Universität Freiburg, Freiburg.
- Rahman, Md.S., Giessen, L., 2017. Formal and informal interests of donors to allocate aid: spending patterns of USAID, GIZ, and EU Forest development policy in Bangladesh. *World Dev.* 94 (2017), 250–267. ISSN 0305-750X. <https://doi.org/10.1016/j.worlddev.2017.01.012>.
- Republic of Indonesia, 2022. Enhanced Nationally Determined Contribution - Republic of Indonesia. Jakarta.
- Sabatier, P.A., Weible, C.M., 2019. The advocacy coalition framework: innovations and clarifications. In: *Theories of the Policy Process*. Routledge, pp. 189–220.
- Silva Junior, C.H.L., Pessoa, A.C.M., Carvalho, N.S., et al., 2021. The Brazilian Amazon deforestation rate in 2020 is the greatest of the decade. *Nat. Ecol. Evol.* 5, 144–145.
- Sudirman, S., 2023. Single executive in the Indonesian presidential system. *Jurnal IUS Kajian Hukum dan Keadilan* 11 (1), 1–16. Available at: 10.29303/i.us.v11i1.962.
- UNFCCC, 2016. Part two: action taken by the conference of the parties at its twenty-first session.
- von Lüpke, H., Aebischer, C., Bolaños, M., 2023a. International partnerships for a just energy transition: findings from South Africa. In: *DIW Weekly Report 5*. DIW, Berlin, pp. 43–49.
- von Lüpke, H., et al., 2023b. Official Development Assistance and International Climate Finance: Path Dependencies and Reform Needs. DIW, Berlin.
- Watson, C., Schalatek, L., Évéquoz, A., 2025. The global climate finance architecture. *Climate Finance Fundamentals*, 2, pp. 1–6. URL: <https://climatefundupdate.org/wp-content/uploads/2025/03/CFE2-2025-ENG-Global-Architecture-DIGITAL.pdf>.
- Yeganeh, A.J., McCoy, A.P., Schenk, T., 2020. Determinants of climate change policy adoption: a meta-analysis. *Urban Clim.* 31, 100547. Available at: <https://doi.org/10.1016/j.uclim.2019.100547>.
- Yin, R.K., 2018. *Case Study Research and Applications: Design and Methods, Sixth edition*. SAGE, Los Angeles.
- Zhunusova, E., Ahimbisibwe, V., Sen, L.T.H., Sadeghi, A., Tarin Toledo-Aceves, T., Gillian Kabwe, G., Günter, S., 2022. Potential impacts of the proposed EU regulation on deforestation-free supply chains on smallholders, indigenous peoples, and local communities in producer countries outside the EU. *Forest Policy Econ.* 143, 102817. <https://doi.org/10.1016/j.forpol.2022.102817>. ISSN 1389-9341.