

Opportunities for enhancing Brazil's environmental regulation effectiveness in the context of OECD accession

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Summary

- 1. Taking the OECD legal instruments addressing forestry and climate issues¹, we find that country-level effectiveness is heterogeneous.** From 2012 on, 33 instruments related to forestry and climate were put in place in the OECD, 12 of which underwent rigorous follow-up analysis.
- 2. Their regulatory effectiveness depends on the adhering countries and their institutional reality.** The OECD does not possess hard enforcement mechanisms; however, peer comparison alongside transparency serve as a means to improvement in regulatory quality². In that sense, over half of the environmental legal instruments considered in our analysis led to regulatory change in over 50% of the adhering countries.
- 3. Through the employment of the Shapley-Shubik index within cooperative games context, we find that there is an opportunity for Brazil to shape OECD's regulatory frameworks such as green finance and green budget.** There are no OECD legal instruments that directly address these issues. Once an OECD member, the country has a say on environmental-related legal instruments within OECD regulation and may shape new legal instruments.

1 For further detail, please refer to: https://www.institutotalanoa.org/_files/ugd/1c28f6_114a9184fad4fd98579da2949f-f7f75.pdf.

2. CORDOVA-NOVION, Cesar; JACOBZONE, Stephane. Strengthening the institutional setting for regulatory reform: The experience from OECD countries. 2011; BARIŞ, Serap. Innovation and institutional quality: Evidence from OECD countries. *Global Journal of Business, Economics and Management: Current Issues*, v. 9, n. 3, p. 165-176, 2019; SHOBANDE, Olatunji Abdul; OGBEIFUN, Lawrence. Has information and communication technology improved environmental quality in the OECD?—a dynamic panel analysis. *International Journal of Sustainable Development & World Ecology*, v. 29, n. 1, p. 39-49, 2022; JACOBS, Scott H. An overview of regulatory impact analysis in OECD countries. ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD). *Regulatory Impact Analysis: Best Practices in OECD Countries*. Paris: Organization for Economic Co-operation and Development, p. 13-30, 1997; MALYSHEV, Nick. Regulatory policy: OECD experience and evidence. *Oxford Review of Economic Policy*, v. 22, n. 2, p. 274-299, 2006.

Context

The effectiveness of OECD legal instruments varies greatly among its members. Legal instruments can be binding (decisions) or not binding (recommendations) in an international law context (OECD a, 2022). Regardless of the nature of the legal instrument, the OECD does not possess a hard enforcement mechanism, that is, the instruments are void of sanctions. Therefore, they carry only the weight of the peer pressure given peer performance comparison and informational transparency.

There are now 258 legal instruments in force in the OECD (OECD b, 2022) addressing more than 300 committees (different topics), working parties, and commissions. This policy brief aims to analyze possible patterns in the effectiveness of OECD legal instruments with differing political leanings of the Executive chair. A cooperative game-theoretic metric is employed. It allows for constructing a measure of the contribution of a country to a similar political block in terms of the effectiveness of a legal instrument. The focus is on legal instruments directly related to environmental questions and those legal instruments that have a follow-up report with disaggregated information at an appropriate level (national level).

Given the efficiency gains possible for Brazil to obtain in acceding to the OECD (Instituto Talanoa, 2022), we now explore the effectiveness of current legal instruments in inducing regulatory change within the previously identified legal instruments addressing forestry and climate change. Furthermore, we seek to evaluate the behavior of member countries in pivoting political decisions in one direction or another. For this, we apply the Shapley-Shubik power index, a metric that accounts for the ability of a bloc of players to pivot some voting in a direction, for all member

behavior, posterior to adherence, for the selected instruments with post-implementation assessment.

Measuring the relevance of a party in driving a vote: the Shapley-Shubik Index

The Shapley-Shubik power index value is a cooperative game metric that estimates the number of times a party cast sequentially the vote that wins the election (or voting) for a coalition - (Laruelle & Valenciano, 2001; Shapley & Shubik, 1954). This index is loosely related to the Shapley value, which measures the average contribution of a player to a coalition, but, contrary to the Shapley value, looks directly at the parties existing amongst the players.

For a party i and given that v is the outcome of the coalition, the Shapley-Shubik power index is given by:

$$Sh_i(v) = \sum_{S \subseteq N(i \in S)} \frac{(s-1)!(n-s)!}{n!} (v(S) - v(S \setminus \{i\})), i = 1, \dots, n$$

The Shapley-Shubik power index has the following properties:

- Considering all parties i in the game, $\sum_{i=1}^n Sh_i(v) = 1$, that is, the Shapley-Shubik power index sums 1 for all parties.
- A Shapley-Shubik power index of 1 indicates that the party or coalition determines the outcome by its vote, while a Shapley-Shubik power index of 0 indicates that the voting by the party does 'not affect the outcome (it is a

dummy party).

In this analysis, what we consider are “party-like” behavior, established by: (i) government type (left, center or right in the year of elaboration of the follow-up report); and (ii) success in promoting regulatory change (binary variable, one in case the country has adopted new regulation or modified existing legislation and zero otherwise). Therefore, we establish six categories: left-failure; left-successful; center-failure; center-successful; right-failure; right-successful. Each member country is inserted into one of these categories for each of the six aforementioned legal instruments. In equation 1, S represents the six categories, while n is the number of countries, v is whether the countries in a given government type are successful in promoting regulatory change.

The result allows us to verify if there is an existing pattern in terms of regulatory implementation (rather successful or not), given government type. In other words, the index allows us to analyze if a government type shifts the result in terms of regulatory change for the OECD instruments.

Data

We use two datasets in our analysis: the OECD forest and climate change-related legal instruments and the Comparative Political Data Set 1960-2019 (Armingeon et al., 2008). We follow the selection presented by Talanoa of the relevant legal instruments³ (a total of 33) and explore the post-implementation follow-up reports elaborated by the OECD. This brings the pool of 33 legal instruments down to six. Qualitative data is extracted from the ex-post regulatory analysis. The Comparative Political Data Set comprises 32 countries, which are members of the OECD, and details with great granularity the political choice of these countries in terms of elections, the political system in place, and the kind of support the government has. The selected OECD legal instruments and the countries present in the Comparative Political Data Set are available in the Annex to this policy brief.

3. Available at: https://www.institutotalanoa.org/_files/ugd/1c28f6_114a9184fadb4fd98579da2949ff7f75.pdf.

Qualitative Analysis of Adherent Country Behavior

Given the available data, the weight of left, center, and right-leaning governments in inducing the regulatory change of a subset of the selected legal instruments. is analyzed next. Of the previously identified 33 legal instruments, twelve have follow-up reports⁴. Still, only six are thorough and allow for an ex-post analysis of the regulatory effectiveness of the instrument in several countries. They are as follows:

- 392: Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships;
- 395: Recommendation of the Council on Assessing the Sustainability of Bio-Based Products;
- 396: Recommendation of the Council on Fighting Bid Rigging in Public Procurement;
- 405: Recommendation of the Council on the Governance of Critical Risks;
- 428: Recommendation of the Council on the OECD-FAO Guidance for Responsible Agricultural Supply Chain;

4. Follow-up reports are elaborated by the respective OECD Committee, working party, or group responsible for monitoring the thematic actions. They are not homogenous reports in that they do not contain analogous sections nor similar levels of detail regarding adoption by different members. Follow-up reports may make suggestions of change, update, or a new legal instrument altogether and the implementation of their suggestions is by no means binding a priori, being that a decision of the OECD Council.

- 434: Recommendation of the Council on Water.

The relationship of each legal instrument is further analyzed in Table 1. Although the OECD legal instruments and their respective follow-up reports do not address forestry and climate change policies directly, they may lead to improved regulation targeting these policy areas as described below. It is noteworthy to highlight that of the six legal instruments, two have immediate and direct impact on forest and climate change policies addressing different aspects that may lead to changes in deforestation rates and GHG emissions (405, 428 and 434).

Table 1. Selected OECD legal instruments and their relationship to climate and forests

OECD/LEGAL	How does it relate to climate and forests?
392 - Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships	Public-Private Partnerships can be leveraged to increase forest preservation and conservation while reducing deforestation through the adoption of economic instruments to leverage private investments (such as delivery modes, consultative procedures, procurement procedures and criteria) and mitigate GHG emissions.
395- Recommendation of the Council on Assessing the Sustainability of Bio-Based Products	Bio-based products can demand an intensive use of natural resources. Therefore, criteria on how to assess sustainability, including impact on climate, can assist in neutralizing GHG emissions.
396- Recommendation of the Council on Fighting Bid Rigging in Public Procurement	Bid rigging through collusion formation in the public procurement process may lead to suboptimal results (including the poor use of taxpayer money). This, however, is not analyzed through a forestry and climate perspective. The current process of public park auctions in Brazil may lead to collusion formation and suboptimal levels of forest preservation and conservation. The current process of public park auctions in Brazil may lead to collusion formation and suboptimal levels of forest preservation and conservation. Climate change policy may use public procurement as an instrument to promote projects that impact emissions. If the procurement process is not well designed, this may lead to collusion (given limited number of private suppliers that possess means to mitigate impact on emissions).

OECD/LEGAL	How does it relate to climate and forests?
405- Recommendation of the Council on the Governance of Critical Risks	Given the increased frequency in the occurrence of extreme climatic events, the governance of critical risks can help alleviate the impact of these events on mankind and nature through further recommendations and studies.
428- Recommendation of the Council on the OECD-FAO Guidance for Responsible Agricultural Supply Chain	The recommendation and follow-up report explore aspects related to sustainable development by establishing due diligence plans which include assessment on the impact of deforestation and GHG emissions.
434- Recommendation of the Council on Water	Efficient management of water resources directly impacts economic activity and environmental preservation and conservation. The recommendations and evaluation are cross-committee (including Committee for Agriculture, the Regional Development Policy Committee, the Regulatory Policy Committee, the Public Governance Committee and the Development Assistance Committee) and directly impact forest and climate change policies.

Source: Talanoa Institute.

The success in the adoption of the legal instruments leading to regulatory change varies greatly among the countries and a priori no regional pattern appears in the successful adoption of a legal instrument. For the selected legal instruments, there is the following successful adoption pattern for center-leaning governments, which are the majority of countries in the sample:

Table 2. Qualitative analysis of selected legal instruments

Instrument	Benchmark on successful implementation	Takeaways for Brazil
392 - Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships	Western Europe and Australia follow some of the recommendations contained in the legal instrument, such as ensuring an institutional framework, supported by competent authorities; aiming for economic efficiency in the partnerships; and ensuring transparency to minimize risk and the legality of the procurement process. The follow-up report indicates the following regulatory improvements: grounding of the selection of PPPs in Value for Money; good practices with regards to key institutions; regular assessment of the affordability for the public budget; a strong role for the Central Budget Authority (CBA) to minimize fiscal risk, and the introduction of integrity measures.	Subnational governments have innovated in infrastructure PPPs by taking into account GHG emissions and other environmental impact variables as selection criteria. These examples may be adopted by the federal government and translated into OECD recommendations.
395 - Recommendation of the Council on Assessing the Sustainability of Bio-Based Products	The United States, United Kingdom, and Japan follow some of these recommendations, such as assessing the sustainability of bio-based products, developing common international standards for sustainable bio-based products, and developing and assessing indicators that measure the sustainability of bio-based products. The follow-up report indicates that the recommendation is deemed relevant by adhering countries and it succeeded in providing a standardized approach to building sustainability into bioeconomy frameworks.	Brazil may adopt the sustainability framework and work alongside the USA, UK, and Japan to continue improving international sustainable standards adopted in bioeconomy.
396 - Recommendation of the Council on Fighting Bid Rigging in Public Procurement	OECD members in the Americas have procurement officials as a specific profession, as suggested by the recommendation. The follow-up report indicates that the recommendation has helped countries design tenders that promote effective competition, and develop tools to detect bid rigging. Moreover, this regulation has been instrumental in many jurisdictions to help competition authorities launch advocacy programmes and raise awareness of bid rigging risks. Countries also report that the Recommendation has also supported the detection by procurement authorities of bid rigging cases, subsequently investigated by competition authorities.	Bid rigging given a design that considers environmental impacts (including deforestation and GHG emissions) has not been assessed. Brazil may work alongside OECD members in the Americas (especially Colombia), to further recommendations and guidelines for economic efficiency and environmental and social sustainability.

Instrument	Benchmark on successful implementation	Takeaways for Brazil
405 - Recommendation of the Council on the Governance of Critical Risks	<p>The United States and the United Kingdom fully follow this recommendation. This legal instrument recommends that: (i) members establish and promote an all-encompassing approach to country risk governance to enhance national resilience and responsiveness; (ii) members build preparedness through studies of different kinds to better anticipate complex and wide-ranging impacts; (iii) developing adaptive capacity; (iv) enhancing transparency and accountability. The follow-up report indicates that central level institutions that manage risks were set in place in most of the adhering countries, however there are differing levels of adoption of all recommendations and some gaps still persist between what the recommendation suggests and its implementations. These gaps relate to the efforts that can be made in the engagement of the private sector, particularly with regards to mapping interdependencies between sectors of critical infrastructure. Other implementation gaps concern the anticipation of human induced threats, and strengthening business continuity planning.</p>	<p>Brazil can benefit by integrating governance of critical risks with its climate change policy, including the wide range of impacts and transparency and accountability measures. This may allow for a more proactive government and homogenous norms as a form of preventive government action.</p>
428 - Recommendation of the Council on the OECD-FAO Guidance for Responsible Agricultural Supply Chain	<p>United Kingdom and Netherlands adhere to some degree to this legal instrument that recommends that: (i) enterprises operating in or from their territories with the aim of ensuring that they observe internationally agreed standards of responsible business conduct along agricultural supply chains in order to prevent the adverse impacts of their activities and contribute to sustainable development, and in particular poverty reduction, food security and gender equality; (ii) that adhering countries support the implementation of the OECD-FAO Guidance for Responsible Agricultural Supply Chain; (iii) ensure that wide dissemination of the Guidance. The follow-up report indicates that even though the dissemination of the Guidance has happened to non-OECD members, none of them have adhered to the legal instrument. Moreover, many adherents have taken steps to work with industry and other stakeholders in their countries to promote the Guidance and the integration of the five-step due diligence framework, and meet the expectations under the Recommendation.</p>	<p>Brazil may benefit from clearly adopting the sustainability standards, leading to gains in foreign commerce.</p>

Instrument	Benchmark on successful implementation	Takeaways for Brazil
434 - Recommendation of the Council on Water	France and Mexico adopt this legal instrument fully. It recommends water management, improvement of water quality, management of water risks and disasters, ensuring good water governance, ensuring sustainable finance, investment and pricing for water and water services. The follow-up reports indicate that adherents generally have in place long-term water planning instruments that consider the many significant, albeit uncertain, factors that will influence future water demand, water availability and exposure to water-related risks. Moreover, all adherents have made significant investments in maintaining or improving water quality levels, considering different water uses and emerging concerns (including new contaminants). Several Adherents also promote a whole-of-society approach to sharing and managing these risks.	Brazil can benefit from adhering to this instrument and integrating water management with deforestation and climate change.

Source: Talanoa Institute.

The previous analysis indicates that legal instruments are usually not implemented in the entirety of their recommendations, but as an organization for best policies and practices, OECD countries on average present results for posterior evaluation of regulatory effectiveness. At the very least, there appears to be transparency and accountability gains by the population.

Regulatory Effectiveness of OECD legal instruments within Cooperative Games

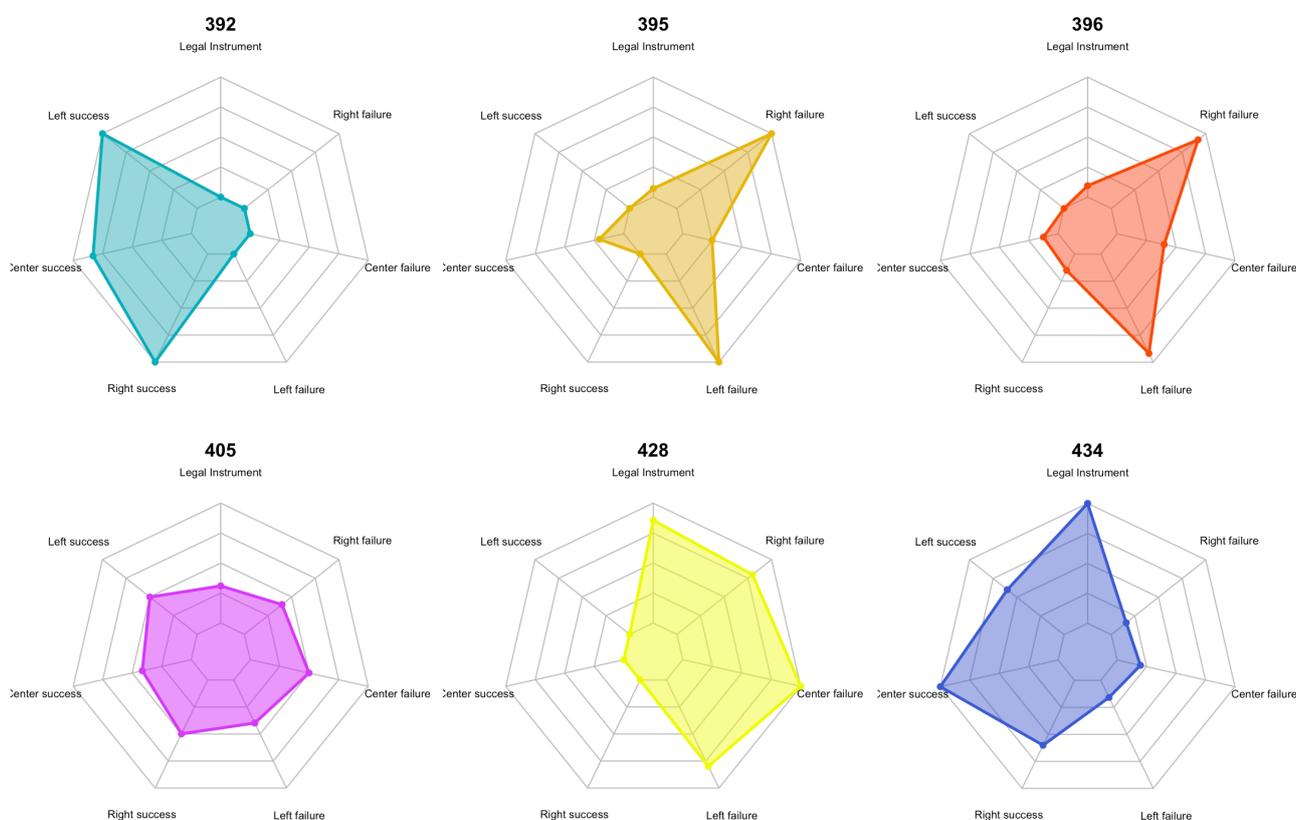
We display the results of Shapley-Shubik⁵ Index for the six aforementioned legal instruments, considering: (i) the type of government set in place three years after adherence to the legal instrument; and, (ii) success in promoting regulatory change.

Regarding the type of government, we consider whether the incumbent government is left, center, or right-leaning⁶. Regarding the success in promoting regulatory change, we consider whether the legal instrument was successful in influencing adhering countries' regulatory framework (either by the adoption of new legislation or by improving existing regulatory marks) or failed in promoting significant legal change within the country's regulatory framework.

5. Differing majority compositions (60%, 70%, and 80%) are presented in the Annex, as robustness check. The majority was composed of 75% of the countries.

6. Left parties are social democratic parties and political parties to the left of social democrats. Right parties are understood as liberal and conservative parties. Center, in turn, denotes center parties, particularly Christian Democratic or Catholic parties (ARMINGEON et al., 2008).

Figure 1. Shapley-Shubik Index for 6 legal instruments



Source: Talanoa Institute.

From the previous Figure 1, we have the following analysis:

- Legal Instrument 392: the instrument successfully promoted a regulatory change in 48% of the adhering countries analyzed. This instrument promotes regulatory change equiprobable among all types of governments.
- Legal Instrument 395: the instrument successfully promoted a regulatory change in 58% of the adhering countries analyzed. Failure to implement the legal instrument is more common than success and, with the Shapley-Shubik Index, this is a sign that failure to deliver is more associated with left-leaning and right-leaning governments and less so with center-leaning governments.
- Legal Instrument 396: the instrument successfully promoted a regulatory change in 55% of the adhering countries analyzed. Failure is more associa-

ted with left-leaning and right-leaning governments, while success is more often associated with center-leaning governments.

- Legal Instrument 405: the instrument successfully promoted a regulatory change in 74% of the adhering countries analyzed. Success and failure occur equiprobable among different government leanings.
- Legal Instrument 428: the instrument successfully promoted a regulatory change in 10% of the adhering countries analyzed. Failure is more commonplace than success and the former is equally probable for differing government leanings.
- Legal Instrument 434: the instrument successfully promoted a regulatory change in 89% of the adhering countries analyzed. Success is more often associated with center-leaning governments than other political inclinations. Although, in the case of failure, there is no difference among differing political affiliations.

Therefore, of the six legal instruments, four lead to regulatory change in the majority of the adhering countries. Furthermore, center-leaning government type countries are more likely to effectively implement regulatory change aligned with the OECD legal instrument and its adhering recommendations.

Final considerations

There are two phenomena at play in an economic political sense: the political inclination of each government and whether a legal instrument delivers regulatory guidelines that are useful for the country at hand. These two phenomena interact and produce the variability present in the effectiveness ex-post drawn in the previous sections.

The effectiveness of the six selected legal instruments varies greatly among the adhering countries of OECD. In political terms, center-leaning governments are more common in OECD countries than left and right-leaning governments. In 2019, according to Armingeon et al. (2008), 75% of the OECD countries in the sample had a center-leaning government.

We find a great variability in the success of a legal instrument in driving regulatory change and innovation in the adhering countries. Of the six selected instruments, the Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships (OECD/LEGAL/0392) was more thoroughly implemented by all adhering countries of different political inclinations than the Recommendation of the Council on Fighting Bid Rigging in Public Procurement (OECD/LEGAL/0396).

Brazil may contribute to improving OECD recommendations, especially considering environmental aspects that address forestry and climate change matters (such as deforestation and GHG emissions) and establishing new legal instruments as indicated in box 1.

Box 1- Opportunity: not fully legislated topics for Brazilian protagonism

Brazil is a continental country, with a wide range of biodiversity⁷, significant forestry coverage⁸, and significant superficial fresh water⁹. Regarding forest and climate change, the OECD still presents a reduced number of legal instruments (33 in total - Talanoa, 2022). The previously explored legal instruments do not address climate change issues directly. With the recently published Roadmap¹⁰, climate change has been addressed as an overarching issue throughout the roadmap as a whole and seven Committees make direct reference to climate change and/or sustainability¹¹.

Brazil might have some special topics of a continental country with a massive forest cover that are non-legislated by OECD or are legislated insufficiently. Topics such as deforestation, genetic variability, climate change mitigation and adaptation, green finance, green budgeting, environmental policy integration, and indigenous-owned land represent

7. More information available at: <https://www.unep.org/news-and-stories/story/megadiverse-brazil-giving-biodiversity-online-boost>.

8. Brazil had 61% of its territory composed of intact forest in 2000, according to Global Forest Watch. More information at: <https://www.globalforestwatch.org/dashboards/country/BRA>.

9. Brazil has 12% of the world fresh water reserves., according to MapBiomas More information at: https://mapbiomas.org/en/superficie-de-agua-no-brasil-reduz-15-desde-o-inicio-dos-anos-90?-cama_set_language=en.

10. Analysis available at: https://www.institutotalanoa.org/_files/ugd/fbc302_08140e37bbe54d-f2b14a48627f4d9c0f.pdf.

11. Environment Policy Committee; Regional Development Policy Committee; Economic and Development Review Committee; Committee of Senior Budget Officials; Regulatory Policy Committee; Committee for Agriculture; Committee on Consumer Policy.

opportunities for Brazil to lead discussions and promote innovative and concrete actions worldwide.

For example, although legal instruments are legislating the license of genetic inventions (OECD/Legal/0342), there is no mention of peoples' knowledge of different plants, animals, and other beings. Hence, intellectual theft of genetic variability is not thoroughly legislated with OECD legislation and may be improved.

The discussion on green growth, green finance and green budgeting are underway within the OECD¹². However, there are no specific legal instruments to address these issues. Brazil may contribute and benefit from instating formal legal instruments and create an international standard under which we can assess these aspects, in particular, how they can explicitly relate with deforestation and climate change.

12. For more information, visit: <https://www.oecd.org/greengrowth/green-growth-key-documents.htm>; <https://www.oecd.org/greengrowth/green-growth-indicators/>; <https://www.oecd.org/cgfi/>; <https://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf>.

The following takeaways are highlighted from the regulatory effectiveness analysis:

- The effectiveness of OECD legal instruments varies greatly across its adhering countries - but over half of the analyzed legal instruments promoted regulatory change in over 50% of the adhering countries. Recommendations can be followed to completion or partially. Adhering countries commit to, at the very least, attempting to improve regulatory frameworks given OECD guidelines.
- Countries are able to adopt recommendations partially to no repercussions. OECD as a group of best policies incentivises exchange of experiences in implementing their legal instruments, partially or to the full letter of the regulation. Hence, Brazil can benefit from this culture of exchanging policy experiences.
- There are a wide range of not fully legislated matters that Brazil can influence once a full member of the OECD, promoting international regulatory improvements: such as in green finance and green budget.
- Brazil will not necessarily need to adopt entirely all of the recommendations associated with a specific legal instrument. However, it will need to provide information regarding instrument implementation once adhered to a legal instrument, providing quality data and being upfront about the implementation process, given existing recommendations.
- Brazil should seek alignment with different countries in influencing OECD legal instrument establishment and recommendations. Given past behavior, Brazil can benefit from strengthening ties with the United States, United Kingdom, France and Mexico for including aspects of climate change and deforestation within existing legal instruments.

References

- Armingeon, K., Careja, R., Potolidis, P., Gerber, M., & Leimgruber, P. (2008). **Comparative political data set III 1990–2006**. Institute of Political Science, University of Berne.
- Instituto Talanoa. (2022). **Acesso do Brasil à OCDE: Possíveis Ganhos de Eficiência**. https://www.institutotalanoa.org/_files/ugd/fbc302_ac8bf7ea6bb-8459d849c64fb5e708a76.pdf
- Laruelle, A., & Valenciano, F. (2001). **Shapley-Shubik and Banzhaf Indices Revisited**. *Mathematics of Operations Research*, 26(1), 89–104. <https://doi.org/10.1287/moor.26.1.89.10589>
- OECD a. (2022). **OECD Legal Instruments**. <https://legalinstruments.oecd.org/en/about>
- OECD b. (2022). **OECD Legal Instruments**. <https://legalinstruments.oecd.org/en/>
- Shapley, L. S., & Shubik, M. (1954). **A Method for Evaluating the Distribution of Power in a Committee System**. *American Political Science Review*, 48(3), 787–792. <https://doi.org/10.2307/1951053>

Appendix

A - Countries considered in the analysis

Austria	Lithuania
Belgium	Luxembourg
Canada	Netherlands
Czech Republic	New Zealand
Denmark	Norway
Estonia	Poland
Finland	Portugal
France	Romania
Germany	Slovakia
Greece	Slovenia
Hungary	Spain
Iceland	Sweden
Ireland	Switzerland
Italy	United Kingdom
Japan	United States of America
Latvia	

B - List of environmental-related legal instruments in the years 2012-2022

Legal Instrument	Year	Legal Instrument Name
471	2022	Recommendation of the Council on Environmental Information and Reporting
476	2022	Recommendation of the Council on Foreign Direct Investment Qualities for Sustainable Development
434	2016	Recommendation of the Council on Water
458	2020	Recommendation of the Council on Environmental Assessment of Development Assistance Projects and Programmes
474	2022	Recommendation of the Council on Creating Better Opportunities for Young People
395	2012	Recommendation of the Council on Assessing the Sustainability of Bio-Based Products
393	2016	Recommendation of the Council on Common Approaches for Officially Supported Exported Credit and Environmental and Social Due Diligence (The "Common Approaches")
460	2020	Recommendation of the Council on the Governance of Infrastructure
436	2017	Recommendation of the Council on Disaster Risk Financing Strategies
473	2022	Recommendation of the Council on SME and Entrepreneurship Policy
420	2015	Recommendation of the Council on Integrated Mental Health, Skills and Work Policy
464	2021	Recommendation of the Council for Agile Regulatory Governance to Harness Innovation
428	2016	Recommendation of the Council on the OECD-FAO Guidance for Responsible Agricultural Supply Chain
397	2012	Recommendation of the Council on the Governance of Clinical Trials
405	2014	Recommendation of the Council on the Governance of Critical Risks

Legal Instrument	Year	Legal Instrument Name
444	2018	Recommendation of the Council on Global Events and Local Development
414	2015	Recommendation of the Council on Guidelines on Corporate Governance of State-Owned Enterprises
440	2018	Recommendation of the Council on Establishing and Implementing Pollutant Release and Transfer Registers (PRTRs)
457	2019	Recommendation of the Council on Responsible Innovation in Neurotechnology
454	2019	Recommendation of the Council on Countering Illicit Trade: Enhancing Transparency in Free Trade Zones
459	2020	Recommendation of the Council on Consumer Product Safety
449	2019	Recommendation of the Council on Artificial Intelligence
403	2014	Recommendation of the Council on Consumer Policy Decision Making
445	2019	Recommendation of the Council on Public Service Leadership and Capability
455	2019	Recommendation of the Council on Competition Assessment
396	2012	Recommendation of the Council on Fighting Bid Rigging in Public Procurement
392	2012	Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships
438	2017	Recommendation of the Council on Open Government
446	2019	Recommendation of the Council on Countering the Illegal Trade of Pesticides
437	2017	Recommendation of the Council on the OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector
419	2015	Recommendation of the Council on Aging and employment Policies
470	2022	Recommendation of the Council on Blockchain and Other Distributed Ledger Technologies
462	2021	Recommendation of the Council on Competitive Neutrality

C - Shapley-Shubik Index for selected OECD legal instruments

Legal Instrument	Left success	Center success	Right success	Left failure	Center failure	Right failure
392	0.333	0.333	0.333	0	0	0
395	0	0.083	0	0.417	0.083	0.417
396	0	0.05	0.05	0.383	0.133	0.383
405	0.166	0.166	0.166	0.166	0.166	0.166
428	0	0	0	0.333	0.333	0.333
434	0.2	0.4	0.2	0.066	0.066	0.066

D - Follow-up reports of selected legal instruments

OECD/LEGAL	Recommendation Name	Link
392	Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships	https://one.oecd.org/document/C(2019)89/en/pdf
395	Recommendation of the Council on Assessing the Sustainability of Bio-Based Products	https://one.oecd.org/document/C(2021)27/en/pdf
396	Recommendation of the Council on Fighting Bid Rigging in Public Procurement	https://one.oecd.org/document/C(2016)10/en/pdf
405	Recommendation of the Council on the Governance of Critical Risks	https://one.oecd.org/document/C(2017)138/en/pdf
428	Recommendation of the Council on the OECD-FAO Guidance for Responsible Agricultural Supply Chain	https://one.oecd.org/document/C(2022)99/en/pdf
434	Recommendation of the Council on Water	https://one.oecd.org/document/C(2020)137/REV1/en/pdf

Source: OECD Legal Instruments.

Legal Instrument	Left success	Center success	Right success	Left failure	Center failure	Right failure
428	0	0	0	0.333	0.333	0.333
434	0.333	0.333	0.333	0	0	0

Source: Talanoa Institute.

- Shapley-Shubik Index for selected OECD legal instruments (80% of a majority)

Legal Instrument	Left success	Center success	Right success	Left failure	Center failure	Right failure
392	0.333	0.333	0.333	0	0	0
395	0.333	0.333	0.333	0	0	0
396	0	0.05	0.05	0.383	0.133	0.383
405	0.2	0.2	0.2	0.15	0.15	0.10
428	0	0	0	0.333	0.333	0.333
434	0.2	0.4	0.2	0.066	0.066	0.066

Source: Talanoa Institute.



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