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Jingting LIU

Thi Hang BANH

Ka Ying WONG

Adam ROMZI

Riddhimaa GUPTA

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Green Provisions and Tariffs Under RCEP: Implications for Environmental Goods Trade

Liu Jingting[†]
Thi Hang Banh[‡]
Wong Ka Ying[§]
Adam Romzi[¶]
Riddhimaa Gupta[*]

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Abstract

Trade in environmental goods has more than doubled over the past two decades, driven by the global push for a green transition. At the same time, trade agreements are increasingly embedding environmental provisions, reflecting the growing intersection of trade policy and sustainability goals. Against this background, in this paper, we examine the environmental dimensions of the Regional Comprehensive Economic Partnership (RCEP), the world's largest trade agreement. Using the TRade & ENvironment Database (TREND), we benchmark RCEP's environmental provisions against other major free trade agreements (FTAs) impacting the bloc and find that RCEP incorporates fewer and less stringent rules. We also analyse tariff schedules for environmental goods, showing that while RCEP's preferences are generally not more favorable than those in existing agreements, they do provide a relative preference margin over average goods. Combining data on environmental provisions and the tariff treatment for environmental goods among RCEP members, we ask how have these impacted environmental goods trade within the bloc. To this end, by estimating a gravity model, we find that across all exporter–importer–product triplets, lower tariffs and additional provisions do not automatically increase trade; however, among country pairs with positive environmental goods trade flows, both tariff reductions and a greater stock of provisions significantly reinforce environmental goods trade. Motivated by these estimates, we finally construct a measure informing the future strengthening and expansion of environmental provisions under RCEP, which ranks the implementation feasibility of the universe of environmental provisions adopted in trade agreements. Our findings thus contribute fine-grained evidence on how environmental provisions and tariff preferences interact under RCEP, offering new empirical insights for policy and future FTA design.

[†] Liu: Senior Lecturer at James Cook University Singapore. **Corresponding author.** Email: cindy.liu@jcu.edu.au.
[‡] Banh: Senior Research Fellow at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Email: hangbanh@nus.edu.sg.
[§] Wong: Master's student at Columbia University. Email: christywong.wc@gmail.com.
[¶] Romzi: Research Assistant at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Email: adam.romzi@nus.edu.sg.
[*] Riddhimaa: Research Assistant at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Email: r_gupta@nus.edu.sg.

1 Introduction

Past research has highlighted that increased global trade could carry negative environmental implications (Leblois et al., 2017; Zhang et al., 2017). In response, free trade agreements (FTAs) have evolved to increasingly include wide-ranging environmental provisions (Lechner, 2016; Morin et al., 2018). While some provisions might be trade protectionism in the guise of environmental protection, some carry the goal of mitigating the potential negative impact from trade (Frankel, 2009). The Regional Comprehensive Economic Partnership (RCEP) stands out as the world's largest regional trade agreement, accounting for approximately one-third of global gross domestic product (GDP), trade volume, and population. Importantly, many RCEP member countries are developing economies situated in tropical regions that are highly susceptible to environmental degradation, particularly deforestation (Gibbs et al., 2010). Against this background, we are motivated to investigate how RCEP interacts with environmental issues.

In this paper, we first analyze the environmental provisions written into and missing from RCEP, compared against the leading FTAs. To do so, we utilize the TRade & ENvironment Database (TREND), a fine-grained dataset that codes all provisions and norms in FTAs related to the environment. We first take stock of the prevalence of environmental provisions included in FTAs – in particular, we compare the changes in the composition of environmental provisions in FTAs signed by RCEP member countries over the years against those of the world. We next compare the composition of major categories of environmental provisions in RCEP with the multilateral trade agreements signed earlier that involve RCEP member countries, such as the "ASEAN+1" FTAs and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). We find that environmental provisions in RCEP are generally lacking and incorporate fewer stricter rules.

Further, as trade in environmental goods and environmental services gained momentum in recent years (WTO, 2022)[1], recent research started examining the impact of environmental goods trade liberalization through reduced tariffs on environmental performance (Marc Bacchetta and Tresa, 2025). In light of this, we examine the tariff schedules of environmental goods and compare these to existing tariff schedules under other preferential trade agreements (PTAs) in place to tease out any preferential treatment under RCEP that might help promote environmental goods trade among the member countries. We find that although tariff schedules of environmental goods under RCEP are generally not more preferential compared to existing trade agreements in force, they do seem to enjoy a better preference margin compared to the average preference margin across all goods.

Finally, we examine the implications of tariff reductions for environmental goods under RCEP and the stock of environmental provisions between a given country pair on their bilateral environmental goods trade. Using an empirical specification inspired by the canonical gravity model, we find that across all exporter–importer–product triplets, lower tariffs and a higher number of environmental provisions do not necessarily translate into higher trade values. However, once we focus on country pairs with nonzero trade flows, tariff reductions under RCEP and a greater number of environmental provisions are found to reinforce environmental goods trade.

Our main contributions are three-fold. First, we contribute to the literature on the effectiveness of environmental provisions in trade agreements. Recent studies have begun to empirically test whether such provisions achieve their intended environmental or trade objectives. For instance, Abman et al. (2024) provide plausibly causal evidence that trade agreements with forest- and biodiversity-related provisions can

[1] According to the policy brief by WTO Secretariat, global trade in environmental goods increased by 243 per cent between 2000 and 2020. Trade in environmental goods also accounted for 4.4 per cent of global trade in 2020.

meaningfully reduce deforestation, particularly for agreements signed after the mid-2000s. Banswal et al. (2025) combine gravity and machine-learning methods to identify which "green provisions" (GPs) have measurable effects on trade and environmental outcomes. Martínez-Zarzoso (2018) analyzes 94 regional trade agreements (RTAs) from 1970–2011 and finds that while membership in RTAs is statistically associated with reduced sulfur-dioxide and nitrogen-oxide emissions, the incremental benefit of explicit environmental provisions remains statistically inconclusive. Similarly, Gisselman et al. (2025) use a gravity model to show that trade agreements containing environmental-goods provisions are not, on average, associated with higher environmental-goods trade than agreements without them. Collectively, this literature suggests that while environmental provisions have evolved and proliferated, their effectiveness depends heavily on design, institutional capacity, and political will, a key context for our focus on the RCEP, which contains fewer and less stringent provisions than other contemporary mega-regional agreements. To our knowledge, our paper is among the first to present fine-grained evidence examining how RCEP's environmental provisions and tariff schedules jointly affect trade in environmental goods; prior studies have largely remained qualitative or macro-level (Fong and Das, 2024).

Second, we add to the literature on the determinants of environmental-goods trade using a gravity-model framework, focusing particularly on tariff differentials between environmental and non-environmental goods. Cantore and Cheng (2018) identify regulatory stringency as a key determinant of environmental-goods trade flows, while Shapiro (2021) documents that import tariffs and non-tariff barriers are generally lower on "dirty" industries than on "clean" ones, where dirtiness is measured by carbon-dioxide emissions per dollar of output. Building on these insights, we estimate the impact of tariff-preference margins under RCEP on trade in environmental goods among member economies, while jointly considering the effects of environmental provisions signed between country pairs. Earlier work has not empirically examined the RCEP bloc from this perspective, leaving an open empirical question on how tariff preferences and environmental commitments interact to shape intra-bloc environmental-goods trade.

Third, we contribute to the comparative literature on environmental provisions in free trade agreements. Velut et al. (2022) provide a comprehensive and critical review of different approaches to trade-and-sustainable-development (TSD) provisions across non-EU FTAs, identifying varying levels of depth, enforceability, and institutional design. Kettunen (2023) examines how sustainability issues are addressed in FTAs involving China and the broader Asia-Pacific region, quantifying how often key phrases such as "sustainable development," "environmental protection," and "human rights" appear in the texts. Building on this comparative groundwork, we provide detailed benchmarking of RCEP's environmental provisions—both those included and those missing—against other major FTAs, such as the CPTPP. This comparison allows us to identify design gaps and to formulate concrete recommendations for incorporating currently absent provisions in potential RCEP upgrades. In contrast to existing research that compares RCEP and other FTAs primarily through simple keyword or phrase-count approaches Malingrey and Duval (2023)), our analysis moves beyond textual frequency to assess the depth, scope, and enforceability of provisions, offering a more systematic policy comparison.

Building on this motivation, the paper addresses 3 central research questions, as follows:

RQ1: How do the environmental provisions in the Regional Comprehensive Economic Partnership (RCEP) compare to those in leading free trade agreements (FTAs) globally and the ASEAN+1 FTAs? This question addresses the qualitative depth and quantitative coverage of environmental commitments in RCEP. Environmental provisions in FTAs are increasingly viewed as a benchmark for "green trade" – incorporating sustainability norms such as pollution control, climate

cooperation, or biodiversity conservation. Comparing RCEP against leading FTAs (e.g., CPTPP) and other ASEAN+1 FTAs allows us to assess whether RCEP aligns with or diverges from global trends toward greener trade governance. RCEP is expected to be less ambitious in both scope and enforceability of environmental provisions. Unlike the CPTPP, which includes binding commitments and dispute settlement mechanisms for environmental matters, RCEP's provisions are general and nonbinding, focusing more on cooperation than regulation. This outcome may reflect RCEP's negotiation philosophy –prioritizing inclusivity and trade liberalization over environmental conditionality.

RQ2: How do RCEP's tariff schedules for environmental goods compare with those under other existing ASEAN+1 FTAs? Environmental goods are vital for achieving green growth. Preferential tariffs can facilitate their trade and adoption. Comparing RCEP's tariff schedule to existing ASEAN+1 FTAs helps reveal whether RCEP provides a new trade advantage for environmental goods or merely consolidates existing preferences.

RQ3: Do lower tariffs and more comprehensive environmental provisions jointly enhance trade in environmental goods between RCEP members? This question examines whether policy depth (environmental commitments) and market openness (tariff reductions) interact to promote environmental goods trade. Theoretically, trade facilitation and regulatory cooperation should be mutually reinforcing: lower tariffs reduce trade costs, while robust environmental rules enhance credibility and stimulate demand for green goods.

The remaining of the paper is organized as follows: In Section 3, we present the trend of environmental provisions in FTAs globally. In Section 4, we zoom in on the RCEP bloc, comparing the composition of environmental provisions in RCEP against other relevant trade agreements at a granular level. In Section 5, we show the tariff preference margin under RCEP covering environmental goods for each RCEP country pair. In Section 6, we estimate the impact of both tariff reductions under RCEP and environmental provisions on environmental goods trade among RCEP countries, complementing the earlier analyses. We additionally propose possible upgrading of RCEP by presenting a methodology evaluating the potential of new environmnetal provisions to be included. Finally, we conclude in Section 7.

2 Data

This paper combines multiple datasets to examine environmental provisions, tariff reduction for environmental goods in RCEP, and the impact of both tariff reduction and environmental provisions on environmental goods trade among RCEP member countries.

Environmental Provisions

Data on environmental provisions are sourced from the TREND. Developed by the Canada Research Chair in International Political Economy at Université Laval in collaboration with the German Development Institute. TREND systematically codes over 300 distinct environmental provisions across 775 international trade agreements, including main texts, annexes, protocols, side agreements, and letters dating back to 1945 (Morin et al., 2018). The database offers detailed insights into the intersection of trade and environmental policy, covering provisions such as the publication of environmental laws and administrative rulings and commitments to renewable energy and energy efficiency. TREND provides a structured, up-to-date reference for analyzing environmental commitments embedded in trade deals. Using TREND, we construct a measure capturing the maximum number of environmental provisions between a given

country pair up to year t for our estimation of the impact of environmental provisions on environmental goods trade in Section 6.

Tariff Data

Our tariff dataset combines three sources: RCEP tariff schedules, existing PTA tariff commitments in 2021, and MFN tariffs in 2021. Tariff schedules of RCEP and existing PTAs are obtained from Banh et al. (2024). The authors systematically extracted RCEP tariff schedules from the legal texts and assembled the most recent tariff commitments under pre-existing ASEAN and ASEAN+1 preferential trade agreements (PTAs). This dataset contains tariff data for all product codes under RCEP and existing PTAs for each country pair.

The MFN tariffs are sourced from the World Integrated Trade Solution (WITS). Since MFN tariffs are reported partly in HS 2017, we harmonize all tariff data to HS 2012 using the United Nations Statistics Division concordance tables. Where necessary, we aggregate 10-digit codes to the HS 6-digit level to preserve comparability. Non–ad valorem tariffs are excluded, and missing PTA tariffs are imputed using MFN rates, following the procedures adopted by Banh et al. (2024). Overall, the dataset provides tariff information across all importer–exporter pairs in RCEP, benchmarked to 2021 when most PTA commitments were already in effect.

Environmental Goods

We focus exclusively on environmental goods. To identify these products, we use the consolidated lists from APEC and the OECD, concorded to the HS 2012 classification. The APEC list was developed as a capacity-building exercise to support economies in reducing tariffs on a set of agreed products, with the twofold objective of facilitating trade and investment liberalisation and advancing environmental goals in a coordinated manner (APEC, 2012).

The OECD list, on the other hand, is one of the oldest and most widely recognised lists in this area. It was designed to inform WTO negotiations on the liberalisation of trade in environmental goods (Steenblik, 2005). For our analysis, we compile a consolidated list that incorporates both the overlapping and unique products from the two sources. While the OECD list is based on HS 1996 classification, for consistency, both APEC and OECD lists are concorded to HS 2012.[2]

Trade Data

We use trade data from CEPII's BACI, an international trade database that covers more than 200 countries and 5,000 products between 1995 and 2023 (Gaulier and Zignago, 2010a).[3]. There are three distinct advantages of using BACI over other trade databases. Firstly, it has comprehensive coverage both geographically and temporally. For our analysis, we use trade values for all RCEP member-country pairs for the years 2020 to 2023, which includes two years prior to RCEP enforcement and two years after. Second, BACI data is arranged using HS codes and is available in each of the six versions of HS for every year and all countries. Specifically, this allowed us to use a consistent HS version across all data sets; since our tariff rates were reported at the HS 2012 level, we downloaded BACI data in the same version. Lastly,

[2]The concordance between HS 1996 and HS 2012 involves a one-to-many mapping. Although UNSD advises against concording older to newer versions, our use is limited to identifying the goods, which does not conflict with classification guidelines.

[3]CEPII stands for Centre d'Études Prospectives et d'Informations Internationales and its database BACI stands for Base pour l'Analyse du Commerce International.

BACI reconciles trade figures from importing and exporting countries, allowing for a singular trade figure at the country pair-product-year level.

Distance and Other Gravity controls

CEPII also provides the GeoDist database, which contains variables widely used in estimating gravity models, at the country-pair level (Gaulier and Zignago, 2010b). The key variable measures the simple distance between the largest populated cities of the two countries. In addition, we include a dummy equal to 1 if the countries share a border. The database also includes a set of cultural dummy variables, indicating whether the countries share an official language or if at least 9% of the population in both countries speaks a common language. Historical and political linkages are likewise captured using dummy variables, such as having had a common colonizer, ever being in a colonial relationship, maintaining such ties after 1945, currently being in a colonial arrangement, or having been part of the same country in the past. The gravity control variables are matched to the panel of country pair-product-year data and the number of environmental provisions between a country pair for the empirical estimation in Section 6.

3 Overview of Environmental Provisions of FTAs

In this section, we provide an overview of the evolution of environmental provisions in FTAs over time by utilizing the TREND.

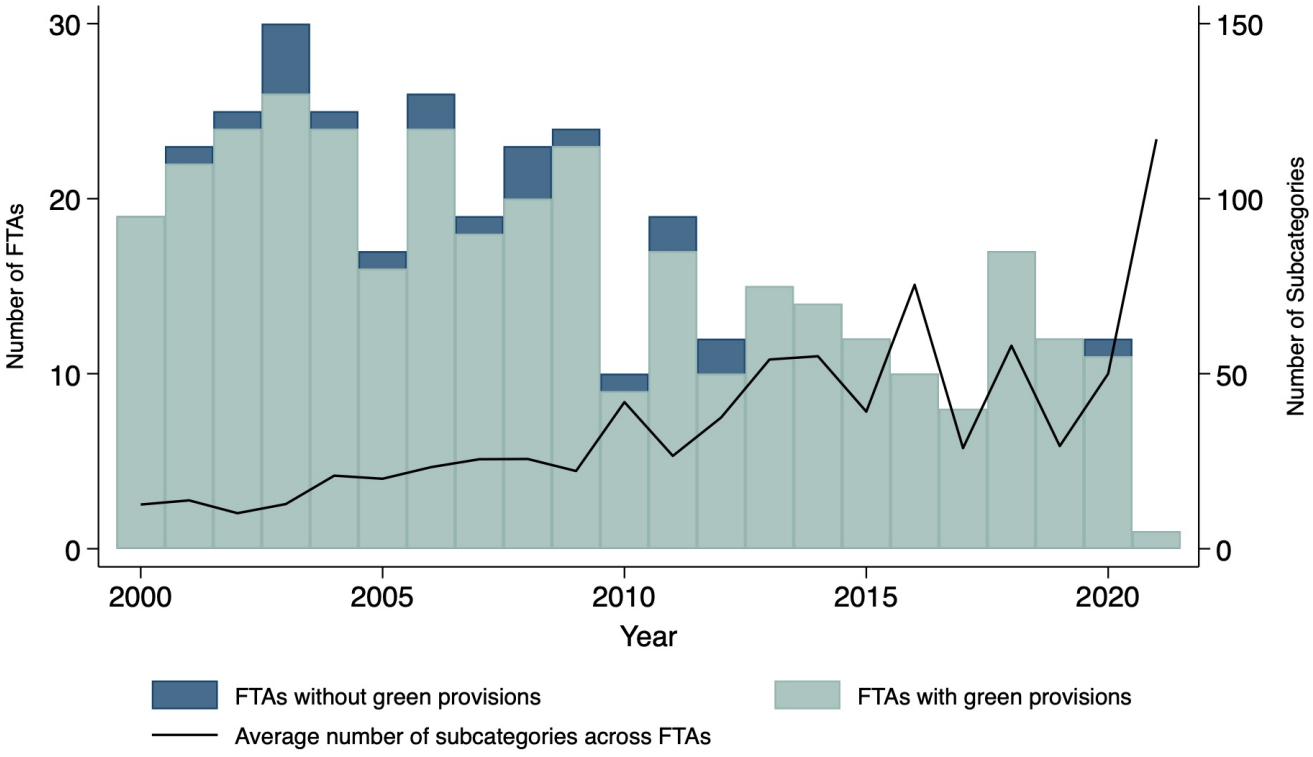
The inclusion of environmental provisions in preferential trade agreements (PTAs) is not a new phenomenon (see Figure 1). Since 2000, the majority of newly enforced PTAs have incorporated some form of environmental clause, and by the 2010s, virtually all agreements included them. This pattern demonstrates the mainstreaming of environmental concerns into trade policy, where "green" provisions have shifted from being occasional add-ons to becoming a standard feature of international trade governance.

While the presence of such provisions became increasingly common over time, their scope and complexity also evolved significantly. In the early 2000s, environmental clauses were narrow in focus, covering fewer than 20 subcategories on average, often limited to basic commitments. After 2010, however, PTAs began to include a much broader and more detailed set of provisions, with the most pronounced expansion occurring after 2015. By 2020, the average number of subcategories exceeded 100, reflecting the proliferation of commitments addressing a diverse range of issues. This evolution underscores the growing importance of environmental governance within the broader framework of global trade policy.

In the early 2000s, the top categories of provisions centered on relations with international institutions, specific trade-related measures, interaction between non-environmental issues and the environment, specific environmental issues, and principles (see Figure 2a). This reflects an initial phase in which FTAs emphasized broad cooperation, general commitments, and basic principles, rather than detailed mechanisms for enforcement.

Among these, specific trade-related measures stood out as the most prominent category. Initially, these provisions largely consisted of general exceptions for trade in goods. Over time, they expanded to also encompass services exceptions. Other related provisions included measures tied to non-tariff barriers and subsidies in relation to the environment, reflecting the intersection of environmental concerns with core trade rules (Figure 2a).

Figure 1: Environmental Provisions in FTAs Over Time



Source: TREND Database and authors' calculations.

As time progressed, the composition of environmental provisions broadened significantly. Categories such as level of environmental protection, law making and policy making, enforcement of domestic measures, means to encourage environmental protection, implementation of the agreement, and dispute settlement mechanisms saw steady increases in the number of provisions included in FTAs. This trend signals a maturation of FTAs with environmental provisions, shifting emphasis from abstract principles and general exceptions toward implementation, enforcement, and accountability. The rise of dispute settlement provisions, for example, reflects efforts to ensure that commitments are not just aspirational but can be upheld in practice. Overall, this trend suggests a structural transformation in the role of environmental provisions within FTAs. The early focus on general cooperation and trade-related exceptions has given way to a more robust and enforceable framework, in which environmental protection is more deeply embedded in the operational rules of trade agreements. This evolution points to a growing recognition of the need not only to acknowledge environmental concerns but also to integrate them directly into the functioning and enforcement mechanisms of international trade.

Figure 2: Trends in the Composition of Environmental Provisions in FTAs, 2000 - 2022

(a) Composition of Environmental Provisions

(b) Composition of Specific Trade-Related Provisions

Source: TREND Database and authors' calculations.

4 Environmental Provisions of FTAs signed by RCEP member countries

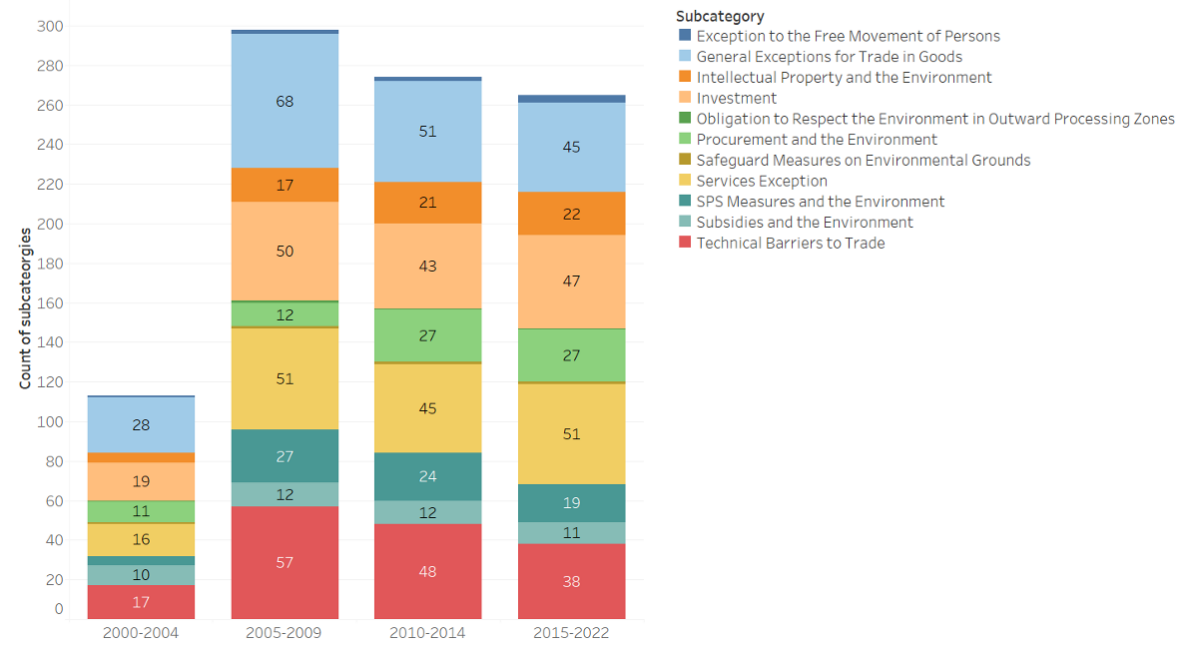
When looking at the composition of environmental provisions in FTAs signed by RCEP member countries, we observe a largely consistent trend with global trends, though with some important differences.

In the early phase of 2000–2004, RCEP countries included substantially fewer environmental provisions compared to the global picture. The counts were very low and concentrated in a handful of categories, primarily relations with international institutions, specific environmental issues, interaction between non-environmental issues and the environment, other cooperation on environmental matters, and specific trade-related measures (see Figure 3a). These trade-related measures were dominated by general exceptions for trade in goods, with services exceptions gradually appearing later, along with other related areas such as subsidies, sanitary and phytosanitary (SPS) measures, and technical barriers to trade (see Figure 3b). This reflects a narrow, exception-based approach to embedding environmental issues within FTAs in the region.

After 2005, however, there was a sharp increase in the number of provisions, mirroring the global pattern of expanding environmental content in FTAs. Notably, there was a growing emphasis on provisions setting out principles related to environmental issues, signifying increased awareness and recognition of environmental matters in trade governance of RCEP member countries. Categories such as specific trade-related measures, specific environmental issues, relations with international institutions, and interaction between non-environmental issues and the environment remained the central pillars of RCEP's environmental provisions, similar to the global trend (see Figure 3a). This indicates that RCEP countries are not diverging from the general direction of FTA evolution worldwide.

Figure 3: Trends in the Composition of Environmental Provisions in FTAs Signed by RCEP Member Countries

(a) Composition of Environmental Provisions Among RCEP Member Countries

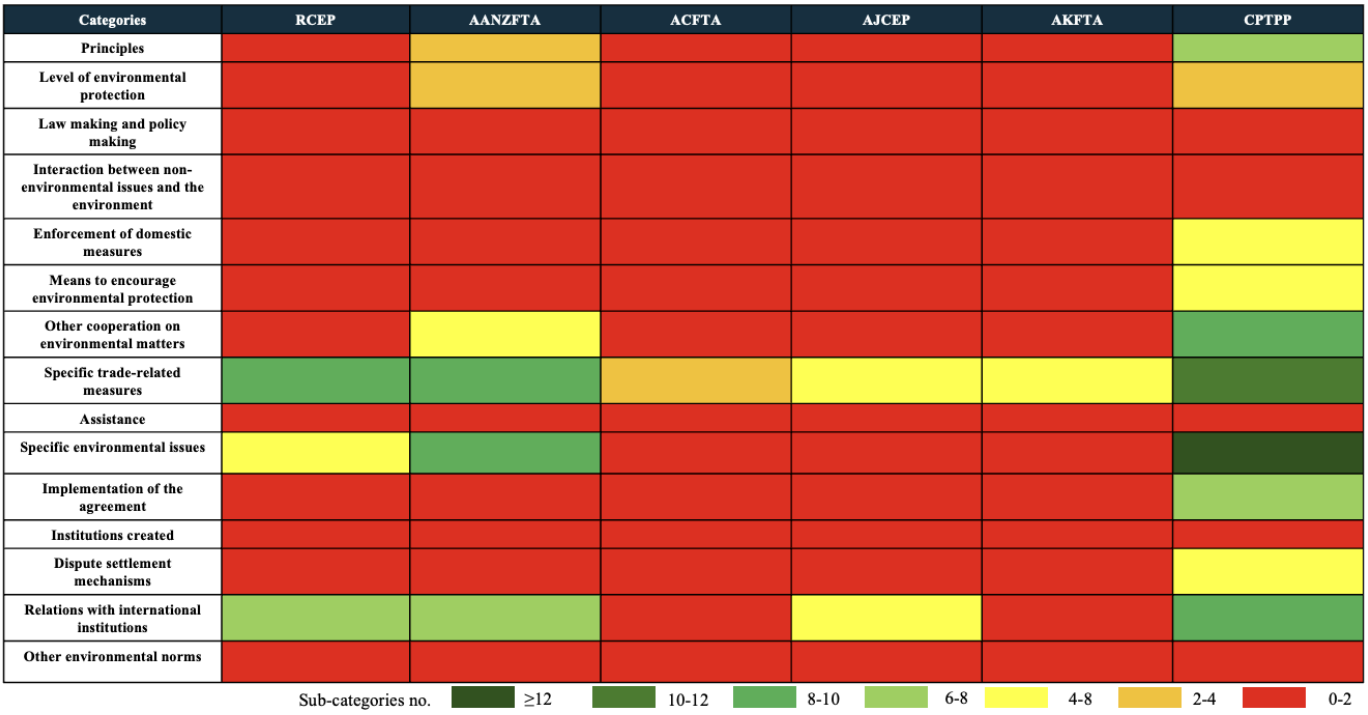


(b) Composition of Specific Trade-Related Provisions Among RCEP Member Countries

Source: TREND Database and authors' calculations.

However, when the ten ASEAN countries, three Northeast Asian countries, and the two Oceania countries came together to conclude the RCEP, the move from ASEAN+1 FTAs to RCEP represents something of a consolidation at the lower end of ambition. Whereas AANZFTA had made incremental advances in embedding provisions beyond basic exceptions, such as provisions on principles, level of environmental protection, specific environmental issues, and cooperation on environmental matters, these gains were not carried forward in RCEP in any substantial way. Instead, RCEP provisions remain concentrated in a small number of areas, namely specific trade-related measures, specific environmental issues, relations with international institutions, and general principles (see Figures 4). Stronger elements—such as law making and policy making, the level of environmental protection, enforcement of domestic measures, implementation of the agreement, and dispute settlement mechanisms—are either absent or extremely weak. The good news is that RCEP is still more advanced than ACFTA, AJCEP, and AKFTA, which contain modest coverage of specific trade-related measures and assistance (and relations with international institutions in AJCEP).

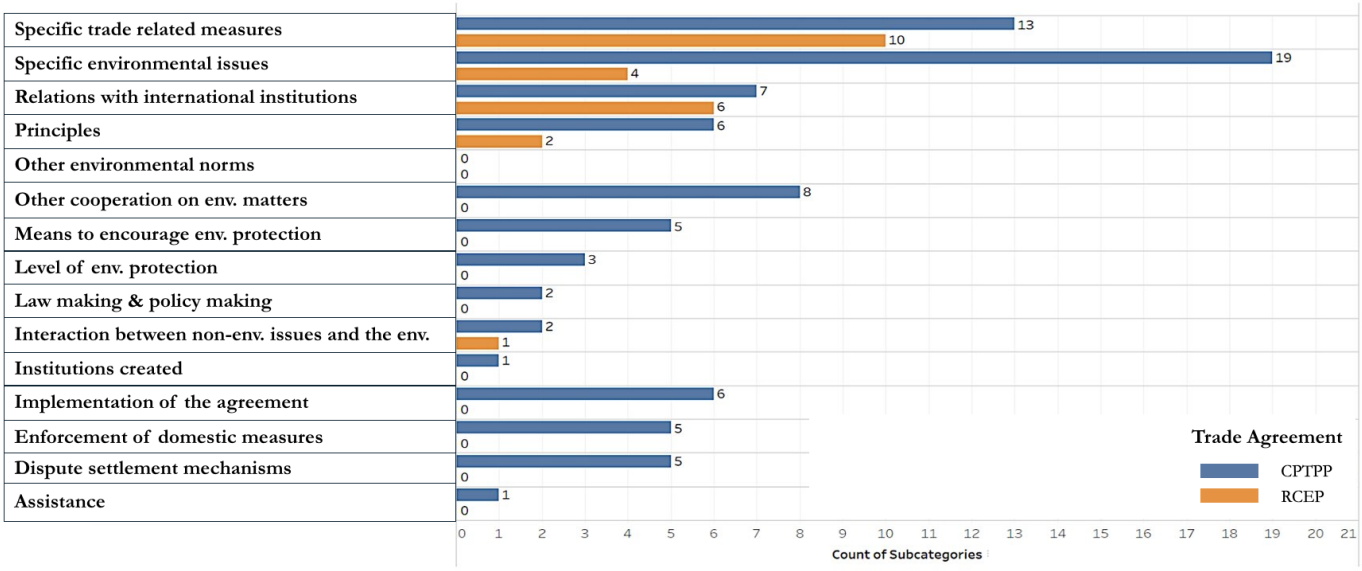
Figure 4: Composition of Environmental Provisions in RCEP and "ASEAN+1" FTAs



Source: TREND Database and authors' calculations.

This outcome becomes starker when compared directly with the CPTPP, which represents the most advanced model in the Asia-Pacific region (see Figures 4 and 5). The CPTPP not only includes more provisions in RCEP's key areas but also extends far beyond them, embedding commitments in implementation, enforcement, and accountability, areas where RCEP is virtually absent. For example, the CPTPP contains multiple subcategories addressing implementation of the agreement, enforcement of domestic measures, and dispute settlement mechanisms, ensuring that environmental provisions are not merely aspirational but legally binding and actionable. CPTPP also integrates environmental protection more explicitly into its governance framework, embedding means to encourage environmental protection and other cooperation on environmental matters, which RCEP does not address.

Figure 5: Composition of Environmental Provisions in RCEP and CPTPP



Source: TREND Database and authors' calculations.

The evolution from ASEAN+1 FTAs to RCEP illustrates a paradox. On one hand, the proliferation of environmental provisions in earlier ASEAN+1 agreements demonstrated a regional willingness to engage with environmental issues in trade. Additionally, RCEP member countries have, in their individual FTAs over the past two decades, followed the same general global trajectory—gradually expanding provisions, diversifying categories, and increasing recognition of environmental issues. However, the consolidated RCEP agreement itself reflects a lowest-common-denominator outcome. Its provisions remain narrow, weaker in scope, and heavily cooperation-oriented, relying on general exceptions, broad principles, and limited institutional references rather than enforceable obligations. This suggests that while RCEP signals recognition of environmental issues within Asia-Pacific trade, it still lags behind global leaders in ambition and enforceability, offering limited progress toward binding integration of trade and environmental governance.

4.1 Upgrading RCEP's environmental provisions

To proxy the feasibility of upgrading RCEP's environmental chapter, Table 8 reports a prevalence-based "likelihood" measure using information from the TRade & ENvironment Database (TREND). For each environmental subcategory, we list the subset of RCEP parties that have already signed that provision in at least one other trade agreement ("Signed countries"), but **not** within the RCEP agreement itself. We then define *Likelihood* as the share of RCEP members with prior exposure to that subcategory. Higher values indicate that the provision is less "new" for the bloc and therefore plausibly easier to incorporate in a future RCEP upgrade. This is a proxy for implementability and does not measure enforcement or actual compliance.

Interpreting the table is straightforward. Within each category, high-likelihood rows represent "low-friction" candidates for an upgrade package because the language is already familiar to many members. Conversely, low-likelihood rows are the harder lift: fewer members have prior exposure, so incorporation

would likely require more negotiation, sequencing, and potentially capacity support.

This framework is most useful when applied to the categories where RCEP is currently weakest. Earlier, we identified *Implementation of the agreement* and *Enforcement of domestic measures* as two areas where RCEP's coverage is thin. Table 8 suggests that even within these weaker areas, there are several provisions that appear relatively feasible to incorporate because many members have already committed to them elsewhere. In the implementation category, these include subcategories such as *Contact point on environmental matters*, *Public participation in the implementation of the agreement*, and *Direct contact between non-state actors of both Parties*. In the enforcement category, the clearest candidate is *binding obligations*. Taken together, the table points to a set of "low-hanging fruit" for strengthening RCEP's environmental chapter: provisions that address recognised gaps while drawing on language that is already common across members' existing FTA commitments.

5 RCEP Tariff Schedules of Environmental Goods

Environmental goods have consistently been a key focus in the negotiation of Preferential Trade Agreements. Both the OECD and APEC lists of environmental goods were specifically designed to support these negotiations. The OECD list serves as a foundation for analyzing trade patterns and tariff structures, while the APEC list was created to help member economies implement tariff reductions.

In this section, we turn our focus to the environmental goods – especially the implications of RCEP on tariff schedules affecting these goods. Specifically, we compare the tariffs on environmental goods under RCEP with those under existing preferential trade agreements (PTA) using the tariff data described in Section 2. We also look at whether environmental goods are treated better compared to other goods under RCEP.

5.1 Methodology

This section briefly describes the methodology. We follow Hayakawa (2022) and Banh et al. (2024) in comparing, for each product line, whether the tariff applied under RCEP is more or less preferential than that under the most favorable pre-existing PTA. We define the tariff margin as the difference between the tariff under the existing PTA and the tariff under RCEP. For each importer–exporter–product triple, the tariff margin is computed as follows:

$$\text{Margin}_{i,j,t} = \text{PTA Tariff}_{i,j,2021} - \text{RCEP Tariff}_{i,j,t} \tag{1}$$

where i denotes product, j denotes partner country, and t denotes year. Positive values indicate that environmental goods enjoy more favourable treatment under RCEP relative to existing PTAs, while negative values indicate the opposite. To move from the product level to the importer–exporter level, we take the average preference margin by aggregating across all margins and dividing it by the total number of environmental product codes for each importer:

$$\overline{\text{Margin}}_{j,t} = \frac{1}{N_{j,t}} \sum_{i=1}^{N_{j,t}} (\text{PTA Tariff}_{i,j,2021} - \text{RCEP Tariff}_{i,j,t}) \tag{2}$$

This average is simply a summary measure of whether, on balance, RCEP is more or less liberalising than the set of existing PTAs for environmental goods. Consistent with Banh et al. (2024), we refer to

this metric as the *RCEP environmental goods preference margin*. With this, we can track the evolution of relative liberalisation over time, both at the level of specific importer–exporter pairs and in the aggregate across ASEAN members and their dialogue partners. Take, for instance, a 5% ad-valorem tariff Malaysia imposes on a hypothetical Good A imported from Australia under the AANZFTA PTA. Under the newly signed RCEP, Malaysia imposes a 3% tariff on Good A, resulting in a 2% RCEP preference margin. We compute such margins for each environmental good and then take the average across all environmental goods. This calculation is repeated for each year of the RCEP implementation schedule, producing a time series of mean margins. We also disaggregate the results by PTA set to capture variation across existing agreements. In addition to the year-by-year trajectory, we also emphasize the final year margin, since it reflects the fully implemented commitments under RCEP. The final year margin provides a clearer picture of the steady-state treatment of environmental goods under RCEP compared to the PTA baseline.

5.2 Results: RCEP Environmental Goods Preference Margins

We present the RCEP environmental goods preference margins in Tables 1, 2, and 3, showcasing the results for ASEAN economies with single schedules, ASEAN economies with multiple schedules, and ASEAN dialogue partners. The first column denotes the importing country, the second the exporting partner, the third the mean RCEP tariff preference margin for environmental goods averaged across all implementation years, and the fourth the mean margin in the final implementation year. Positive values indicate that RCEP is more liberalising than existing PTAs, while negative values imply the opposite. The tables in Appendix A show which PTA for each country-pair was used to compute the margins. In Appendix B, we also include a set of time series plots of RCEP preference margins by country, which is the result of Equation 2: the average preference margin across all environmental goods per country pair.

Table 1: Average and Final RCEP Environmental Goods Preference Margins: ASEAN Countries with Single Schedules

Country	**Partner**	**Average Margin**	**Final Margin**
Malaysia	Korea	-1.79	-0.613
	China	-1.82	-0.623
	Australia & N. Zealand	-2.05	-0.858
	ASEAN member states	-2.05	-0.858
Brunei	Japan	-0.348	+0.218
	China	-0.499	+0.0671
	Australia & N. Zealand	-0.567	0
	ASEAN member states	-0.567	0
	Korea	-0.567	0
Thailand	Japan	+3.18	+3.54
	China	+0.116	+0.475
	Korea	-0.455	-0.0965
	Australia & N. Zealand	-0.642	-0.284
	ASEAN member states	-0.642	-0.284
Cambodia	Japan	-2.44	+1.14
	Australia & N. Zealand	-3.30	+0.279
	Korea	-4.85	-1.27
	China	-5.31	-1.73
	ASEAN member states	-6.42	-2.84
Laos	Japan	+2.54	+4.01
	Australia & N. Zealand	-1.21	+0.260
	Korea	-1.53	-0.0544
	ASEAN member states	-1.91	-0.436
	China	-1.91	-0.436
Myanmar	Japan	+3.25	+4.01
	Australia & N. Zealand	-0.568	+0.260
	China	-0.754	-0.436
	Korea	-0.799	-0.0544
	ASEAN member states	-0.836	-0.436

Source: Author's calculations based on tariff schedules, APEC & OECD data.

Table 2: Average and Final RCEP Environmental Goods Preference Margins: ASEAN Countries with Multiple Schedules

Country	**Partner**	**Average Margin**	**Final Margin**
Indonesia	Korea	-0.470	+0.106
	Australia	-0.542	+0.0554
	N. Zealand	-0.542	+0.0554
	Japan	-0.597	-0.0376
	ASEAN member states	-0.677	-0.0557
	China	-0.702	-0.125
Philippines	Korea	-0.158	+0.126
	Australia	-0.170	+0.114
	N. Zealand	-0.170	+0.114
	Japan	+3.52	+3.81
	ASEAN member states	-0.376	-0.0925
	China	-0.219	+0.0709
Vietnam	China	-0.322	+0.176
	Korea	-0.418	+0.0906
	Australia & New Zealand	-0.893	-0.337
	ASEAN member states	-0.927	-0.371
	Japan	-1.08	-0.534

Source: Author's calculations based on tariff schedules, APEC & OECD data.

Table 3: Average and Final RCEP Environmental Goods Preference Margins: ASEAN Dialogue Partners

Country	**Partner**	**Average Margin**	**Final Margin**
Australia	N. Zealand	-0.454	-0.162
	China	-0.454	-0.162
	Japan, Singapore, & Vietnam	-0.454	-0.162
	Korea	-0.454	-0.162
China	Korea	+0.0634	+0.740
	Australia	-1.10	+0.302
	N. Zealand	-1.11	-3.07
	ASEAN member states	-0.998	-0.240
Japan	China	+0.821	+0.893
	Korea	+0.821	+0.893
	Australia, N. Zealand, Singapore, & Vietnam	-0.0717	0
Korea	Japan	+2.37	+3.66
	China	-0.447	-0.0659
	ASEAN member states	-0.857	-0.231
	Australia	-0.934	-0.308
	N. Zealand	-0.934	-0.308
N. Zealand	Japan, Singapore, & Vietnam	-0.863	-0.345
	ASEAN member states & Australia	-0.893	-0.375
	China	-0.893	-0.375
	Korea	-0.893	-0.375

Source: Author's calculations based on tariff schedules, APEC & OECD data.

There is considerable heterogeneity in the results, reflecting the varied structure of tariff commitments among RCEP members. For simplicity, we focus on the final year preference margin to capture long-term liberalization effects.

Malaysia records uniformly negative margins, implying its earlier PTAs already offered deeper tariff cuts for environmental goods. Brunei's results are largely neutral, with small positives only for Japan and China. Thailand's pattern is partner-specific, strong liberalization for Japan (+3.54) and moderate for China (+0.48), but weaker for Korea, Australia, New Zealand, and ASEAN. The smaller ASEAN members show mixed outcomes: Cambodia, Laos, and Myanmar record large positive margins for Japan (around +4 in Laos and Myanmar) and smaller gains for Australia & New Zealand, yet negative margins for China, Korea, and ASEAN partners.

The results for ASEAN members with multiple schedules (Indonesia, the Philippines, and Vietnam) and for dialogue partners (Australia, China, Japan, Korea, and New Zealand) reveal additional nuances in RCEP's liberalization of environmental goods. Indonesia shows largely neutral to slightly positive outcomes. Final-year margins for Korea, Australia, and New Zealand turn marginally positive, indicating small additional gains under RCEP, while Japan and its ASEAN partners remain slightly negative. This suggests that Indonesia's prior PTAs already offered substantial tariff reductions, leaving limited room for RCEP to deepen liberalization. The Philippines demonstrates broader liberalization, with positive margins across almost all partners except ASEAN. The largest benefits accrue to Japanese exports (+3.81), pointing to significant new access. This implies a strengthening of bilateral integration in environmental goods between Japan and the Philippines, potentially fostering technology transfer and investment in cleaner production. Vietnam's results are more subdued, with small positive margins for China (+0.18) and Korea (+0.09) but persistent negatives for Japan and other partners. This suggests that RCEP yields only incremental liberalization for Vietnam, as most tariff reductions were already embedded in ASEAN+1 arrangements.

Among the dialogue partners, patterns diverge sharply. Australia exhibits consistently negative margins, implying that RCEP does not improve upon its already liberal PTA network. For China, RCEP brings selective benefits—positive gains with Korea (+0.74) and modest improvements with Australia (+0.30), but losses with New Zealand and ASEAN. Japan experiences the most pronounced liberalization, with strong positive margins vis-à-vis both China and Korea (+0.89), reflecting new market openings where no prior bilateral PTAs existed. Korea also gains substantially from RCEP in relation to Japan (+3.66), with smaller losses elsewhere, reinforcing a reciprocal liberalization dynamic within Northeast Asia. By contrast, New Zealand's results are uniformly negative, showing that RCEP largely replicates or slightly reduces the preferences available under its existing agreements.

Together, these findings highlight RCEP's selective deepening of environmental-goods trade. The Japan–Korea–China triad benefits most, as RCEP creates the first structured tariff liberalization among them, strengthening regional supply-chain connectivity in green technologies. For most ASEAN members and for Australia–New Zealand, however, RCEP functions primarily as a consolidating framework rather than a new driver of liberalization.

From a policy perspective, RCEP's uneven effects suggest that tariff reform alone is insufficient to expand regional trade in environmental goods. Future efforts should emphasize harmonizing standards, easing non-tariff barriers, and encouraging regional technology partnerships to ensure that the agreement's modest tariff gains translate into broader environmental and developmental benefits across the Asia-Pacific.

5.3 RCEP Preference Margins in Environmental Goods vs. Other Goods

To assess whether RCEP grants more favourable treatment to environmental goods relative to other goods, we compare preference margins across two product categories for each country–partner pair. Specifically, we compute the difference between the RCEP preference margin for environmental goods and that for all other goods. A positive value indicates that environmental goods are treated more favourably, while a negative value indicates the opposite. Note that this comparison is relative, where a positive difference does not necessarily imply that environmental goods enjoy an absolute preference margin under RCEP, only that they fare better than other goods. In contrast, the previous section focused exclusively on the absolute margins for environmental goods relative to existing PTAs.

Figure 6 presents these differences in the final year of RCEP implementation. The y-axis shows the exporting partner, and the x-axis represents the percentage-point difference between the tariff margin on environmental good imports and imports of other goods. Panel (a) shows results for ASEAN members with single RCEP schedules. Most countries in this group exhibit positive differences, meaning that environmental goods are treated better under RCEP than other goods. Laos seems to stand out, having a stronger relative treatment of environmental goods, indicating an active effort to prioritize environmental trade liberalization. In contrast, Cambodia shows persistently negative differences in red, meaning that other goods remain more favourable on average. For Brunei, differences cluster around zero, meaning near-equal treatment between environmental and other goods.

Panel (b) looks at ASEAN members with multiple RCEP schedules. Differences in preference margins between environmental and other goods are generally smaller in magnitude, particularly for the Philippines, where most values cluster close to zero. Nonetheless, the pattern remains positive across country–partner pairs, showing that even in cases where multiple schedules apply, environmental goods tend to receive slightly more favourable treatment under RCEP. The relative advantage is therefore more muted than in Panel (a), but the direction of treatment is positive, albeit only marginally. The prevalence of positive relative margins among ASEAN members, especially less industrialized economies like Laos, signals an emerging policy commitment to align trade liberalization with environmental objectives. These outcomes, although modest, may reflect an awareness of the developmental potential of cleaner technologies and sustainable production inputs. Additionally, the muted relative advantages in multi-schedule countries suggest that domestic political economy factors and pre-existing PTA overlaps constrain the scope for differentiation. In contrast, countries with simpler schedules (e.g., Laos) seem more capable of carving out specific priorities for environmental goods. Policymakers should thus consider simplifying tariff structures or introducing dedicated green chapters in future trade revisions to ensure consistent prioritization.

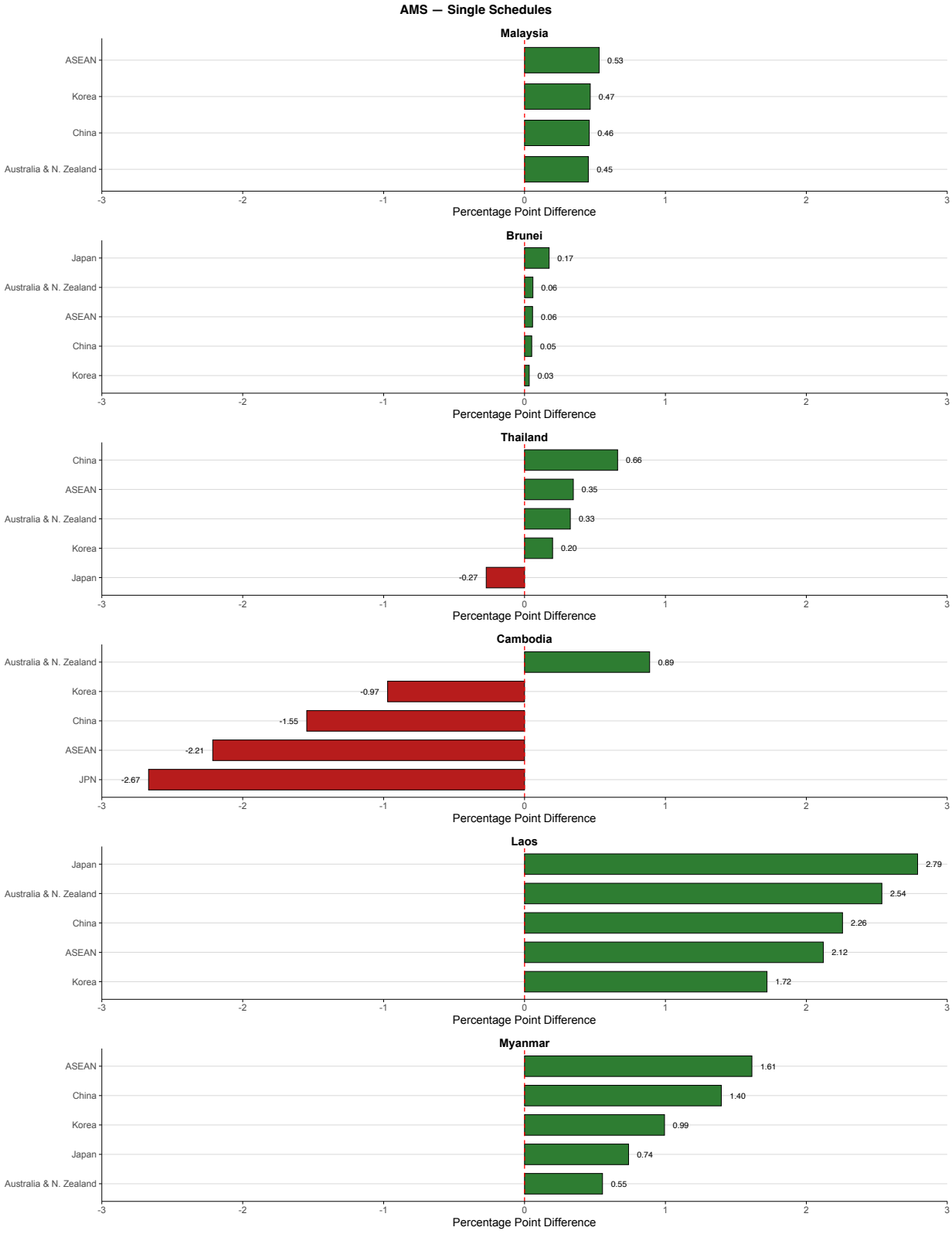
Panel (c) presents the results for ASEAN's dialogue partners. Most of the difference here falls in the negative (red) side, meaning that for most country pairs, environmental goods imports are treated worse compared to other goods. The negative margins however are very marginal for Australia and New Zealand. The largest negative margin is experienced by Japan's imports, where Korean and Chinese environmental good imports are treated worse compared to other goods. As for China, only Korean environmental goods imports are treated worse, whereas for Korea, both Chinese and Japanese environmental good imports are treated worse. Overall, the evidence suggest that the more significant disadvantages for environmental goods under RCEP are concentrated among the dialogue partners, particularly Japan. hlThe negative or near-zero differentials observed among dialogue partners highlight an inconsistency in RCEP's approach to environmental trade. While ASEAN members lean toward favoring environmental goods, larger economies such as Japan and China appear to treat them no differently, or even less favorably, than other products.

This asymmetry could slow the diffusion of green technologies region-wide and undermine the bloc's collective contribution to environmental goals.

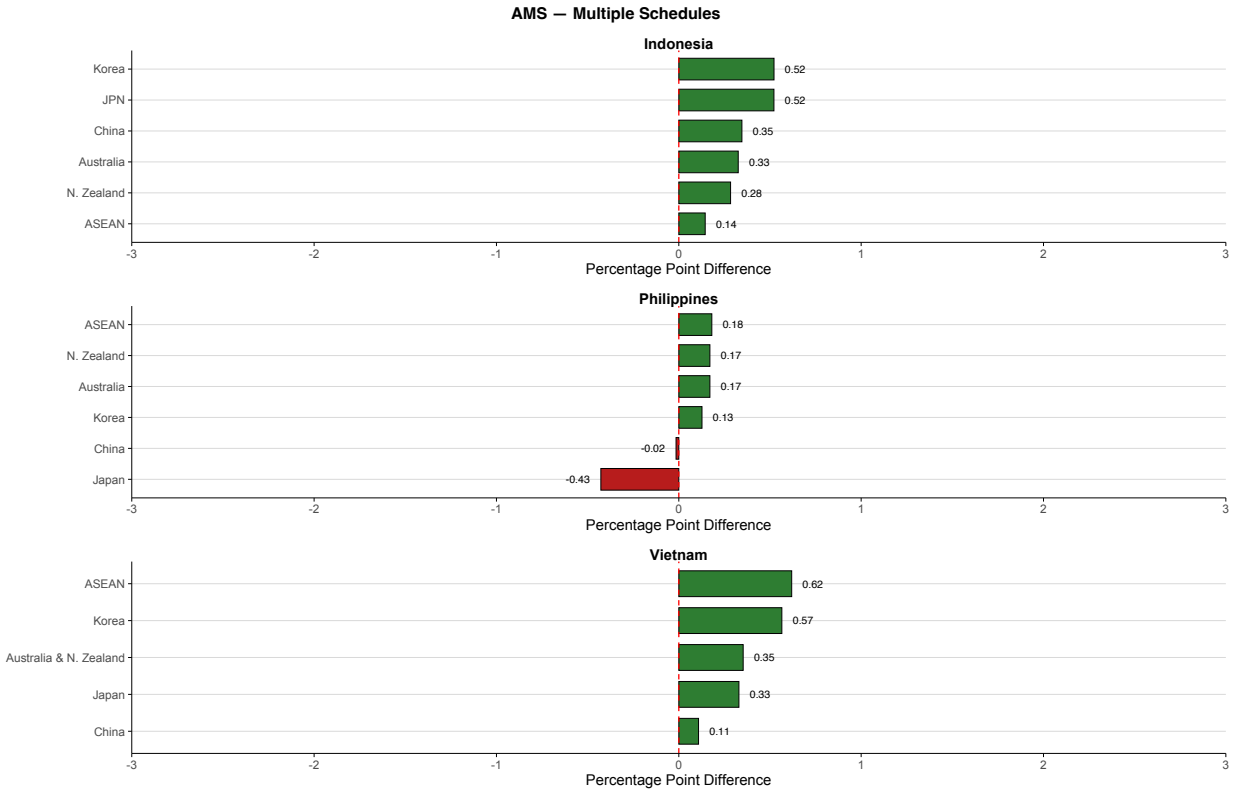
Overall, RCEP's relative tariff structure reveals that environmental goods are not yet systematically prioritized across the bloc. Positive differences in ASEAN contrast with negative patterns among dialogue partners, implying that environmental goods remain peripheral to the trade strategies of larger economies. Again, for RCEP to function as a driver of green regionalism, complementary policy measures, such as harmonized environmental standards, investment facilitation in green industries, and capacity-building for least developed members, will be essential to turn modest tariff differentials into substantive environmental gains.

Figure 6: Final Year RCEP Preference Margin Difference between Environmental and Other Goods

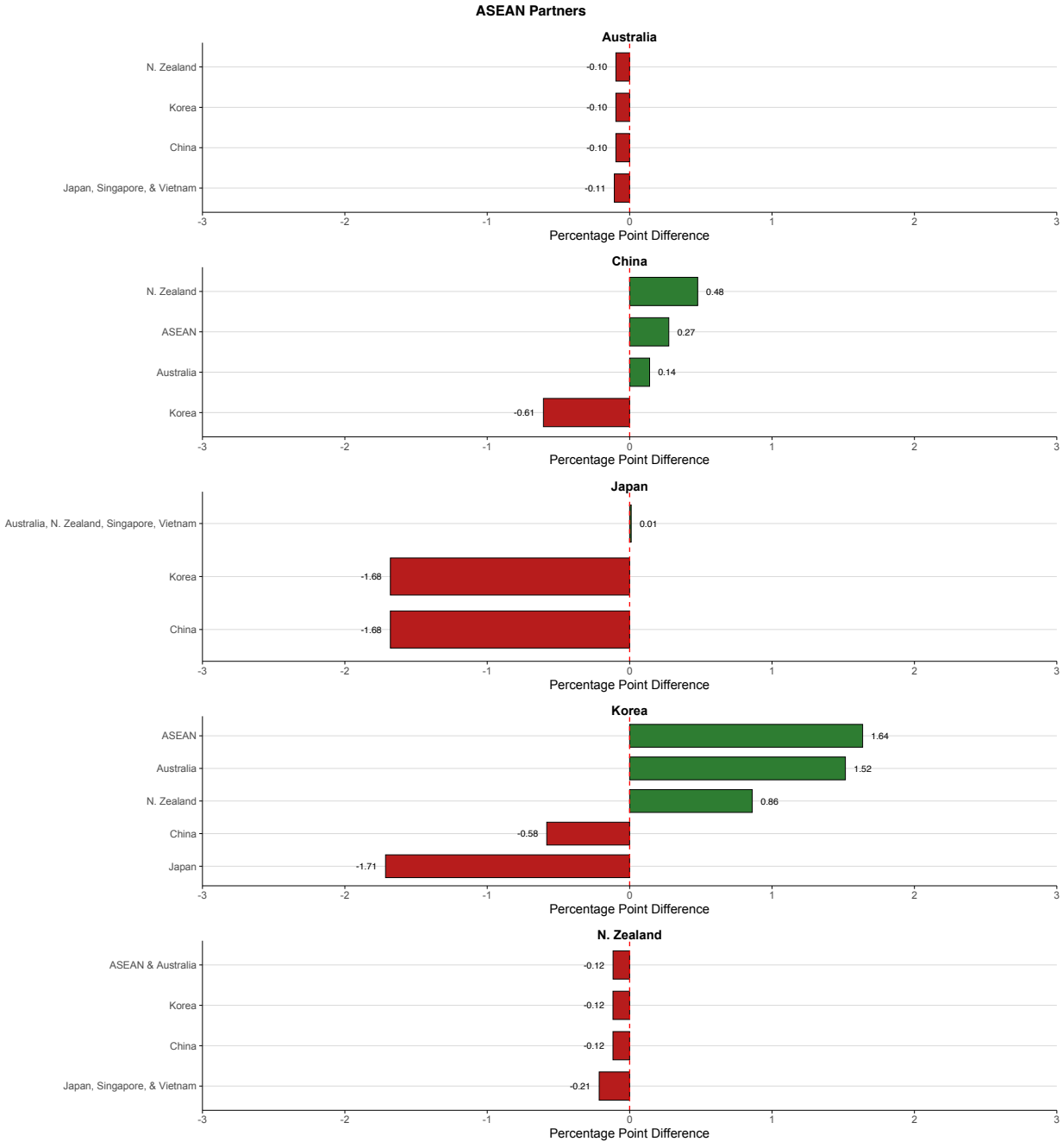
(a) ASEAN Countries with Single RCEP Schedules



(b) ASEAN Countries with Multiple RCEP Schedules



(c) ASEAN Dialogue Partners



Source: Author's calculations based on tariff schedules, APEC, & OECD data.

6 Trade Implications of Tariff Reductions and Environmental Provisions

From the previous section, we saw that RCEP is more liberalising than current PTAs in its tariff schedule for some bilateral country pairs. In this section, we utilize the gravity equation to examine the impact of lower tariffs, as well as green provisions, on bilateral trade in environmental goods.

The gravity model, attributed to Tinderberg (1962), is an econometric model widely used in economics and trade literature to estimate bilateral trade flows. In its basic form, it posits that bilateral trade flows are a function of countries' size, measured commonly by Gross Domestic Product, and the distance between them. While a country's larger economic size is a trade-contributing factor, barriers to trade, such as greater geographical distance, are inversely related to trade flows, as they add to trade costs. Thus, according to the model, the alleviation of trade costs, such as tariffs and non-tariff barriers, is expected to increase trade flows between countries.

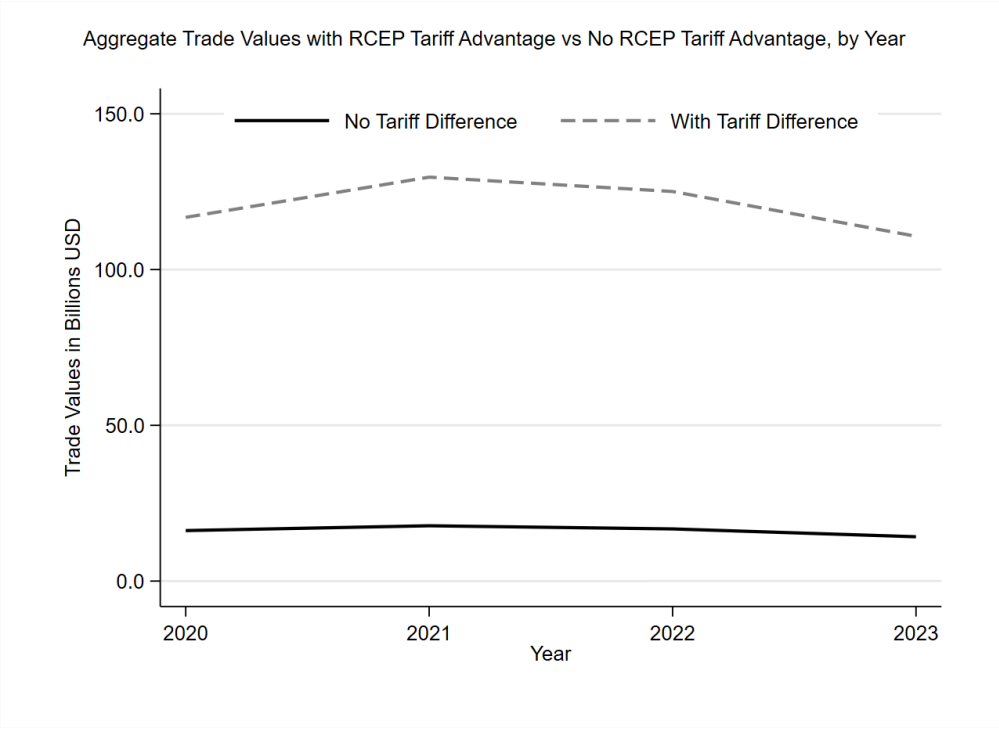
We hypothesize that preferential tariff reductions under RCEP increase bilateral trade flows of environmental goods, and a greater number of environmental provisions as part of trade agreements between country pairs contributes positively to the trade of such goods.

6.1 Empirical Strategy

This section utilizes the environmental provisions data, tariff data, trade data on environmental goods, and gravity variables described in Section 2. The tariff data can be divided into two periods: Pre-RCEP and Post-RCEP. RCEP went into force in 2022, and we consider the years 2020, 2021, 2022, and 2023 – two years prior to RCEP enforcement and two years after. The first two years only contain tariff rates from other PTAs signed between RCEP member countries. From 2022 onward, RCEP rates are available. There are a few country-level caveats. Indonesia and the Philippines signed the agreement in 2023, so their Post-RCEP period covers only one year. Singapore is excluded from our analysis because it eliminates all customs duties on originating goods under RCEP from the date of entry and is therefore not included in Banh et al. (2024).

An important terminology in the tariff data for our analysis is the Negative Preference Margin, defined as the difference between RCEP rates and non-RCEP rates (it is the additive inverse of Equation 1 computed in Section 5.1). This is computed at the importer–exporter–product–year level. By definition, it is zero for 2020 and 2021. From Figure 7, we see that the aggregate trade values for the sub-sample with a tariff advantage under RCEP are significantly lower compared to the sub-sample with no tariff advantage, highlighting that there is considerable heterogeneity between the two.

Figure 7: Aggregate Trade Values with RCEP Tariff Advantage vs No RCEP Tariff Advantage, by Year



Source: CEPII BACI and authors' calculations.

More formally, we estimate four regression specifications at the importer–exporter–product triplet level for the years 2020–2023. Equations (3) and (4) examine the effect of tariffs in general, as well as the marginal effect of tariffs for importer–exporter–product triplets that experienced tariff improvements under RCEP through an interaction term. Equations (5) and (6) instead use the preference margin, defined as the tariff difference between RCEP and non-RCEP rates, to capture how the degree of tariff change affects trade flows. Across all specifications, we incorporate environmental provisions as an additional independent variable of interest to capture whether signing more environmental provisions is beneficial to environmental goods trade. Finally, we include standard gravity controls and fixed effects to absorb time-varying exporter-year, importer-year, and product-year shocks, as well as time-invariant exporter-product and importer-product characteristics.

$$X_{ijkt} = \exp(\beta_1 \text{Applied Tariff}_{ijkt} + \beta_2(\text{Applied Tariff}_{ijkt} \times \text{Improve}_{ijkt}) + \beta_3 \text{MaxProv}_{ijt} + \gamma_1 \ln \text{Dist}_{ij} + \gamma_2 \text{Controls}_{ij} + \mu_{it} + \nu_{jt} + \theta_{kt} + \phi_{ik} + \psi_{jk} + \varepsilon_{ijkt}) \quad (3)$$

The dependent variable X_{ijkt} is defined as the bilateral trade value of product k imported from country j to country i in year t. The key regressor Applied Tariff_{ijkt} is the tariff assumed to be applied to product k, taking the lower of the RCEP and non-RCEP rates. The coefficient β_1 therefore captures the effect of the overall applied tariff on bilateral trade. Improve_{ijkt} is a dummy variable equal to 1 if the RCEP rate is lower than the non-RCEP rate for product k in year $t \geq 2022$, and 0 otherwise. The interaction term Applied $\text{Tariff}_{ijkt} \times \text{Improve}_{ijkt}$ measures whether this tariff effect is different when RCEP provides a

preferential improvement.

$$\ln X_{ijkt} = \beta_1 \text{Applied Tariff}_{ijkt} + \beta_2(\text{Applied Tariff}_{ijkt} \times \text{Improve}_{ijkt}) + \beta_3 \text{MaxProv}_{ijt} + \gamma_1 \ln \text{Dist}_{ij} + \gamma_2 \text{Controls}_{ij} + \mu_{it} + \nu_{jt} + \theta_{kt} + \phi_{ik} + \psi_{jk} + \varepsilon_{ijkt} \quad (4)$$

Equations (3) and (4) differ in the dependent variable. Equation (3) uses trade values in levels and is estimated using Pseudo-Poisson Maximum Likelihood on a balanced panel, while Equation (4) takes logarithms and is estimated only for positive trade flows, focusing on the intensive margin of trade. Gravity controls include $\ln \text{Dist}_{ij}$, the logarithm of distance between countries i and j, and a vector of bilateral dummies, Controls_{ij}, capturing common official and ethnic language, colonial relationships, common colonizer, and contiguity.

$$X_{ijkt} = \exp(\beta_1 \text{Tariff Diff}_{ijkt} + \beta_2 \text{MaxProv}_{ijt} + \gamma_1 \ln \text{Dist}_{ij} + \gamma_2 \text{Controls}_{ij} + \mu_{it} + \nu_{jt} + \theta_{kt} + \phi_{ik} + \psi_{jk} + \varepsilon_{ijkt}) \quad (5)$$

Equation (5) introduces $\text{Tariff Diff}_{ijkt}$ as the main independent variable, defined as the difference between RCEP and non-RCEP tariffs when RCEP is lower. Here, β_1 captures the effect of the negative preference margin on trade flows, that is, how much additional trade arises from incremental RCEP tariff margin improvements relative to other agreements.

$$\ln X_{ijkt} = \beta_1 \text{Tariff Diff}_{ijkt} + \beta_2 \text{MaxProv}_{ijt} + \gamma_1 \ln \text{Dist}_{ij} + \gamma_2 \text{Controls}_{ij} + \mu_{it} + \nu_{jt} + \theta_{kt} + \phi_{ik} + \psi_{jk} + \varepsilon_{ijkt} \quad (6)$$

Equation (6) differs from (5) in that it takes the log of bilateral trade flow. In all four specifications, MaxProv_{ijt} is the cumulative maximum number of environmental provisions signed between country pair i–j up to year t, with its coefficient indicating whether more environmental commitments facilitate or restrict trade. To address unobserved heterogeneity, we include exporter–year fixed effects (μ_{it}), importer–year fixed effects (ν_{jt}), and product–year fixed effects (θ_{kt}) to absorb time-varying multilateral resistance and global product shocks. Exporter–product fixed effects (ϕ_{ik}) control for time-invariant comparative advantage, while importer–product fixed effects (ψ_{jk}) control for time-invariant demand preferences. Standard errors are clustered at the importer–exporter–product level.

6.2 Results

Table 4 presents the results of estimating the four equations described above. Panel A corresponds to Equations 3 and 4, which share the same explanatory variables but differ in their dependent variables, levels versus logs, capturing the distinction between a balanced panel and one restricted to observations with non-zero trade values. Column 1 shows that higher applied tariffs are associated with higher trade values. This is counterintuitive but can be explained by the fact that Column 1 uses a balanced panel, meaning some countries may have lower tariffs but still not trade in these goods, not because of higher trade costs but due to other reasons, such as a lack of comparative advantage. By contrast, for country pairs that experienced

tariff reductions under RCEP since 2022, lower tariffs are associated with higher trade values. In Column 2, focusing only on country pairs with non-zero trade, the applied tariff effect persists, suggesting that environmental goods trade is not highly elastic to tariff changes. Other factors, such as higher compliance thresholds, may play a stronger role in determining bilateral trade flows.

On the environmental provisions front, Column 1 indicates that a greater number of provisions is associated with lower trade values, which again might be due to the prevalence of zero trade flows for certain exporter-importer-product triplets. However, when restricting the sample to trading country pairs, Column 2 shows that more provisions are associated with higher environmental goods trade.

Panel B estimates the impact of tariff reductions under RCEP (i.e., negative preference margins). Column 3 shows that lower tariffs under RCEP are associated with higher trade values, although the effect is statistically insignificant. For provisions, consistent with the baseline results in Column 1, across all country pair–product triplets, a higher number of provisions is associated with lower environmental goods trade values—likely due to the presence of zero trade flows for certain triplets. However, once we focus on trading country pairs, Column 4 provides the most interesting estimate of our analysis: a 1% tariff margin decrease under RCEP relative to other PTAs increases trade by approximately 7%. This suggests that in the realm of environmental goods, RCEP member countries exhibit high trade elasticity to tariff changes under the agreement. Similar encouraging results are observed for environmental provisions, where a greater number of such provisions leads to higher trade.

Overall, our findings suggest that, when considering all exporter–importer–product triplets, lower tariffs and a greater number of environmental provisions do not necessarily result in higher trade values. For country pairs not trading environmental goods, breaking down nontariff barriers might be more effective in inducing trade alongside other factors. Meanwhile, among country pairs with positive trade flows, tariff reductions under RCEP and an expanded stock of environmental provisions appear to strengthen environmental goods trade.

The results collectively indicate that RCEP's capacity to stimulate environmental goods trade hinges on a two-tier mechanism. For active trading partners, tariff reductions and environmental provisions jointly magnify trade intensity, underscoring RCEP's value as a consolidating framework for green trade. For inactive or weaker trade relationships, the absence of complementary institutional and capacity-building measures limits the potential impact of RCEP's tariff preferences. Hence, member governments should complement tariff liberalization with initiatives such as targeted green-technology assistance, institutional support for certification, and stronger cooperation mechanisms.

These findings underline a crucial insight: RCEP's trade liberalization can advance environmental goals only when combined with enabling domestic conditions. The significant elasticity among trading pairs suggests that once trade begins, it can scale rapidly, reinforcing cross-border supply chains in clean energy, waste management, and environmental services. However, the persistence of zero-trade cases reveals that many economies remain excluded from this dynamic. Bridging this divide requires aligning trade policy with development cooperation, turning RCEP from a passive trade framework into an active platform for green regional transformation.

Table 4: Tariff preferences and bilateral product-level trade

	Panel A		Panel B	
	(1) PPML	(2) OLS ln	(3) PPML	(4) OLS ln
Tariff variables				
Applied tariff	0.0211**	0.0490***	–	–
	(0.0086)	(0.0080)		
RCEP improvement × Applied tariff	-0.0187**	-0.0021	–	–
	(0.0090)	(0.0129)		
Tariff difference (RCEP – non-RCEP)	–	–	-0.0019	-0.0684***
			(0.0155)	(0.0168)
Gravity controls				
ln distance	-0.5154***	-1.1307***	-0.5196***	-1.1417***
	(0.0396)	(0.0283)	(0.0396)	(0.0282)
Contiguity	-0.1033	0.1678***	-0.1394	0.1556***
	(0.0870)	(0.0450)	(0.0871)	(0.0449)
Common official language	0.2444**	0.4859***	0.2394**	0.4898***
	(0.1117)	(0.0575)	(0.1113)	(0.0574)
Common ethnic language	-0.0495	0.2360***	-0.4525***	0.2275***
	(0.0820)	(0.0490)	(0.0812)	(0.0490)
Ever colony	-0.5082***	-0.3353***	-0.4974***	-0.3031***
	(0.1067)	(0.1058)	(0.1043)	(0.1068)
Common coloniser	1.0325***	1.4711***	1.0379***	1.4745***
	(0.1485)	(0.0717)	(0.1487)	(0.0718)
Current colony[a]	(omitted)	(omitted)	(omitted)	(omitted)
Same country	-0.5313***	-1.2357***	-0.5404***	-1.2518***
	(0.1142)	(0.0958)	(0.1123)	(0.0958)
Max. provisions	-0.0031***	0.0015***	-0.0032***	0.0015***
	(0.0008)	(0.0004)	(0.0008)	(0.0004)
Constant	15.8069***	13.5903***	15.8576***	13.6957***
	(0.3198)	(0.2353)	(0.3719)	(0.2350)
Fixed effects				
Exporter × year	Yes	Yes	Yes	Yes
Importer × year	Yes	Yes	Yes	Yes
Product × year	Yes	Yes	Yes	Yes
Product × exporter	Yes	Yes	Yes	Yes
Product × importer	Yes	Yes	Yes	Yes
Observations	113,712	64,073	113,712	64,073
Clusters (prod×exp×imp)	28,428	19,368	28,428	19,368
Pseudo R^2 / R^2	0.9403	0.7220	0.9402	0.7217

Notes: Columns (1) and (3) estimate Poisson Pseudo–Maximum Likelihood models with fixed effects. Columns (2) and (4) report OLS on ln(trade value) with identical fixed effects. Standard errors clustered at the product×exporter×importer level are in parentheses.
[a] *curcol* drops for collinearity in all specifications.
Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

6.3 Policy considerations

This subsection discusses policy considerations that follow from the paper's two core findings. First, RCEP's environmental chapter signals growing mainstream attention to sustainability in trade policy, but its coverage remains relatively thin in areas that typically determine credibility, namely implementation, enforcement, and accountability. Second, the trade effects associated with RCEP's environmental dimensions appear to be realised primarily where environmental goods trade already exists, which is consistent with the presence

of non-tariff barriers, fixed market entry costs, and capacity constraints that tariffs alone may not resolve. These patterns suggest that any effort to strengthen RCEP's environmental contribution is likely to be most effective when it is (i) sequenced in a politically feasible manner, and (ii) paired with institutional and operational measures that reduce frictions to implementation.

A central practical question is therefore not only what an upgraded environmental package should contain, but also what is plausibly implementable within a diverse bloc. To proxy feasibility, Table 8 in the Appendix C reports a prevalence-based "likelihood" measure using information from the TRade & ENvironment Database (TREND). For each environmental subcategory, we list the subset of RCEP parties that have already signed that provision in at least one other trade agreement ("Signed countries"), but not within the RCEP agreement itself. We then define *Likelihood* as the share of RCEP members with prior exposure to that subcategory. Higher values indicate that the provision is less "new" for the bloc and therefore plausibly easier to incorporate in a future RCEP upgrade. This is a proxy for implementability and does not measure enforcement or actual compliance.

Interpreting the table is straightforward. Within each category, high-likelihood rows represent "low-friction" candidates for an upgrade package because the language is already familiar to many members. Conversely, low-likelihood rows are the harder lift: fewer members have prior exposure, so incorporation would likely require more negotiation, sequencing, and potentially capacity support. This framework is most useful when applied to the categories where RCEP is currently weakest. Earlier, we identified *Implementation of the agreement* and *Enforcement of domestic measures* as two areas where RCEP's coverage is thin. Table 8 suggests that even within these weaker areas, there are several provisions that appear relatively feasible to incorporate because many members have already committed to them elsewhere. In the implementation category, these include subcategories such as *Contact point on environmental matters*, *Public participation in the implementation of the agreement*, and *Direct contact between non-state actors of both Parties*. In the enforcement category, the clearest candidate is *binding obligations*. The table essentially points to a set of "low-hanging fruit" for strengthening RCEP's environmental chapter: provisions that address recognised gaps while drawing on language that is already common across members' existing FTA commitments.

This feasibility lens motivates a sequencing approach to policy considerations. A pragmatic near-term path would start with high-likelihood provisions that close recognised gaps, then progressively move toward lower-likelihood provisions that may require more time, negotiation, and administrative preparation. In operational terms, this points to an upgrade strategy with three layers. The first layer is content that is relatively familiar across members and can be incorporated with limited legal novelty. The second layer is institutional scaffolding that makes the first layer meaningful in practice. The third layer is capacity-oriented cooperation that reduces the risk that higher ambition simply becomes symbolic text.

In practice, the feasibility lens in Table 8 is best read as a sequencing guide. A pragmatic approach would begin with the high-likelihood provisions that address recognised gaps in implementation and enforcement, and treat lower-likelihood items as medium-run upgrades that may require additional negotiation and administrative preparation. To avoid upgrades remaining purely declaratory, members could pair early-stage additions with light institutional scaffolding, such as clearer reporting expectations and a standing forum for consultation and information exchange. Where implementation capacity is uneven, targeted technical cooperation can help ensure that higher ambition is matched by the ability to operationalise commitments.

7 Conclusion

In this paper, we examine the environmental provisions among RCEP member countries, the tariff reductions on environmental goods under RCEP, and their combined impact on environmental goods trade. By benchmarking RCEP against pre-existing ASEAN+1 FTAs, the CPTPP, and global trends, and empirically testing the preliminary impact of RCEP's tariff reductions on trade in environmental goods, our analysis provides a nuanced understanding of RCEP's role in shaping green trade governance in the Asia-Pacific region.

Our findings reveal a paradox. On the one hand, RCEP reflects the global mainstreaming of environmental concerns in trade agreements: it includes environmental provisions and offers relative tariff preferences for environmental goods. On the other hand, the scope and ambition of these provisions remain limited. Compared to advanced agreements such as the CPTPP, RCEP falls short in embedding binding mechanisms for implementation, enforcement, and dispute settlement. Instead, it consolidates a lowest-common-denominator approach, with commitments largely oriented around cooperation and broad principles rather than legally enforceable obligations. This limits the potential of RCEP to serve as a strong vehicle for environmental governance through trade.

The analysis of tariff schedules reveals that tariffs on environmental goods under RCEP are generally higher than the most favorable rates found in pre-existing PTAs. Among member states, the Japan–China–Korea trilateral trade relationship appears to gain the most from RCEP's tariff framework. Yet, these same countries also show relatively modest tariff cuts for environmental goods compared with reductions applied to other products. This divergence highlights the uneven nature of liberalization within the bloc.

Our gravity model estimations provide further insight into these dynamics. Across all exporter–importer–product triplets, neither tariff reductions nor the accumulation of environmental provisions automatically lead to higher trade in environmental goods, reflecting structural constraints and the persistence of non-tariff barriers. However, once we condition on positive trade flows, both lower tariffs and a greater stock of environmental provisions are positively associated with higher trade values. These results suggest that the benefits of RCEP's environmental dimensions are realized only where trade in environmental goods already exists, implying limited capacity to stimulate entirely new trade relationships in this sector.

Taken together, the results suggest several key implications. First, while RCEP contributes incrementally to green trade by offering preferential treatment to environmental goods and signaling recognition of environmental issues, its limited scope prevents it from serving as a high-level agreement. Second, the uneven effects across country pairs highlight the need for deeper coordination and more ambitious commitments if the bloc is to deliver meaningful progress in environmental governance.

Looking ahead, RCEP offers a foundation upon which more ambitious commitments could be built. First, there is a need to strengthen the depth and enforceability of environmental provisions. RCEP's current framework is heavily cooperation-oriented, relying on broad principles and exceptions rather than binding obligations. This leaves significant gaps in implementation, enforcement, and accountability.

The question is therefore not only what to strengthen, but how to sequence upgrades in a way that is negotiable and implementable. To move from broad priorities to a practical upgrade path, we use a prevalence-based proxy (Table 8, based on TREND) to identify provisions that may be lower-friction candidates for incorporation because many RCEP members have already committed to similar language in other trade agreements. The intent is not to claim that prior exposure guarantees enforcement or

compliance, but to distinguish provisions that are plausibly easier to negotiate and operationalise from those that are a harder lift and may require longer timelines and capacity support.

This feasibility lens clarifies what "strengthening" can mean in the RCEP context. Rather than treating upgrades as all-or-nothing, it supports a staged approach that begins with high-likelihood provisions in areas where RCEP is currently weakest, while building the institutional scaffolding needed for more ambitious commitments over time. This aligns the paper's comparative benchmarking with an implementation-aware perspective on how RCEP could evolve without assuming convergence to CPTPP-style depth in a single step.

Policymakers should consider introducing mechanisms—either through amendments, side agreements, or implementation protocols—that establish clearer standards, monitoring, and dispute settlement procedures for environmental commitments. This can be achieved through (a) annexes or side protocols that define specific implementation targets (e.g., technology transfer benchmarks, renewable energy cooperation goals), (b) the establishment of a monitoring and review mechanism modeled after the CPTPP's Environment Committee, and (c) the introduction of transparent reporting obligations and consultative dispute resolution procedures for non-compliance. Doing so would align RCEP with global best practices and enhance its credibility in supporting sustainable development.

Second, given that RCEP's current tariff reductions primarily benefit existing trade relationships, the bloc should pursue phase-two liberalization that harmonizes environmental goods tariff schedules across members. A concerted effort to align RCEP's product coverage with the APEC and OECD environmental goods lists would also facilitate consistency and reduce administrative uncertainty for exporters. In parallel, members should target tariff peaks in sectors such as clean energy equipment and pollution-control technology to stimulate new trade and investment in green industries.

Third, complementary policies beyond tariffs are essential. For many RCEP countries, especially developing members, the barriers to environmental goods trade lie not only in tariffs but also in non-tariff measures, weak regulatory capacity, and a lack of harmonized standards. Regional cooperation should focus on: (i) Developing common technical standards and mutual recognition frameworks for eco-labels and green certifications; (ii) Establishing capacity-building programs to help smaller economies meet environmental compliance requirements; (iii) Promoting digital trade facilitation and transparent customs procedures for environmental goods to lower transaction costs. Such initiatives would complement tariff reductions and ensure that the benefits of RCEP's environmental provisions are more widely distributed across members.

Additionally, this study opens multiple avenues for further research on trade–environment linkages under RCEP and beyond. Future studies could use firm-level or product-level customs data to identify the micro-level channels through which tariff cuts and environmental provisions affect trade performance. This would clarify whether observed increases in trade volumes stem from intensive margin effects (greater trade by existing firms) or extensive margin effects (entry of new exporters). Since RCEP's implementation is still at an early stage, longitudinal analyses will be essential to capture delayed effects of tariff liberalisation and institutional learning. Over time, researchers could examine whether RCEP's environmental provisions lead to policy convergence, technology diffusion, and supply chain restructuring in environmental industries. Finally, future work should move beyond trade metrics to assess the real environmental impact of RCEP. Linking trade data to indicators such as carbon intensity, renewable energy adoption, and pollution abatement could help determine whether trade liberalisation under RCEP contributes to genuine environmental improvements or simply redistributes production across borders.

In sum, RCEP represents both a missed opportunity and a latent potential for green trade leadership in the Asia-Pacific. Realising this potential will require coordinated policy reforms that deepen environmental commitments, broaden market access for environmental goods, and align trade integration with sustainability goals. For scholars, RCEP offers a fertile ground for advancing the empirical and theoretical understanding of how twenty-first-century trade agreements can be harnessed to serve the dual imperatives of economic growth and environmental stewardship.

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A Country-partner pairs and associated PTA(s)

The tables in this appendix section show the country-partner pairs and their respective PTAs used to calculate the preference margin.

Table 5: ASEAN Countries with Single Schedules: Country-partner Pairs and Associated PTA

Country	**Partner**	**PTA**
Malaysia	Korea	AKFTA
	China	ACFTA
	Australia & New Zealand	AANZFTA
	ASEAN members	ATIGA
Brunei	Japan	AJCEP
	China	ACFTA
	Australia & New Zealand	AANZFTA
	ASEAN members	ATIGA
	Korea	AKFTA
Thailand	Japan	AJCEP
	China	ACFTA
	Korea	AKFTA
	Australia & New Zealand	AANZFTA
	ASEAN members	ATIGA
Cambodia	Japan	AJCEP
	Australia & New Zealand	AANZFTA
	Korea	AKFTA
	China	ACFTA
	ASEAN members	ATIGA
Laos	Japan	AJCEP
	Australia & New Zealand	AANZFTA
	Korea	AKFTA
	ASEAN members	ATIGA
	China	ACFTA
Myanmar	Japan	AJCEP
	Australia & New Zealand	AANZFTA
	China	ACFTA
	Korea	AKFTA
	ASEAN members	ATIGA

Table 6: ASEAN Countries with Multiple Schedules: Country-partner Pairs and Associated PTA

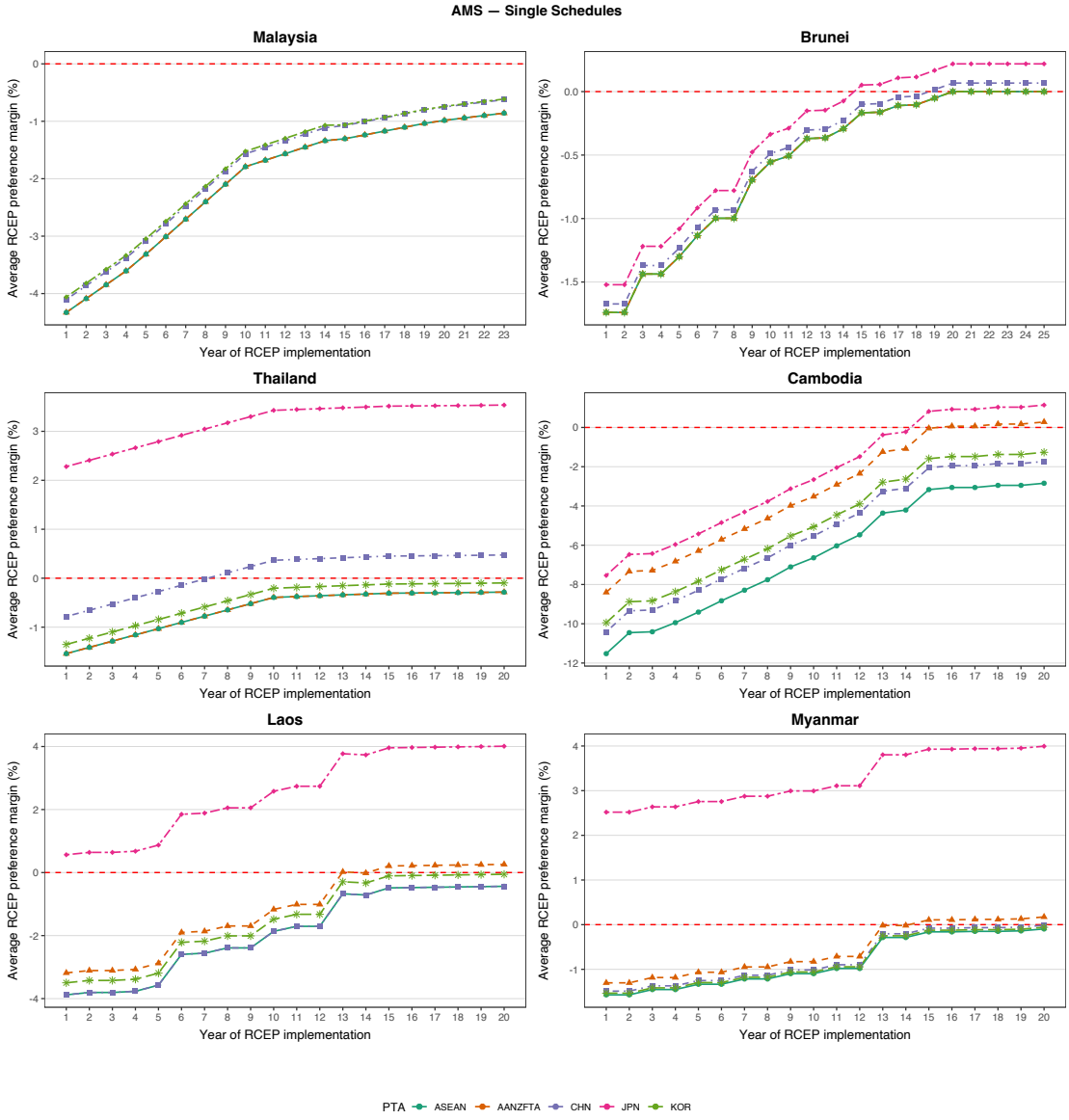
Country	**Partner**	**PTA**
Indonesia	Korea	AKFTA
	Australia	AANZFTA
	New Zealand	AANZFTA
	Japan	AJCEP
	ASEAN members	ATIGA
	China	ACFTA
Philippines	Korea	AKFTA
	Australia	AANZFTA
	New Zealand	AANZFTA
	Japan	AJCEP
	ASEAN members	ATIGA
	China	ACFTA
Vietnam	China	ACFTA
	Korea	AKFTA
	Australia & New Zealand	AANZFTA + CPTPP
	ASEAN members	ATIGA
	Japan	AJCEP + CPTPP

Table 7: ASEAN Dialogue Partners: Country-partner Pairs and Associated PTA

Country	**Partner**	**PTA**
Australia	New Zealand	AANZFTA + CPTPP
	China	ChAFTA
	Japan, Singapore, Vietnam	CPTPP
	Korea	KAFTA
China	Korea	CSKFTA
	Australia	ChAFTA
	New Zealand	NZ–China FTA
	ASEAN members	ACFTA
Japan	China	MFN
	Korea	MFN
	Australia, New Zealand, Singapore, Vietnam	CPTPP
Korea	Japan	MFN
	China	CSKFTA
	ASEAN members	AKFTA
	Australia	KAFTA
	New Zealand	KNZFTA
New Zealand	Japan, Singapore, Vietnam	CPTPP
	ASEAN members, Australia	AANZFTA
	China	NZ–China FTA
	Korea	KNZFTA

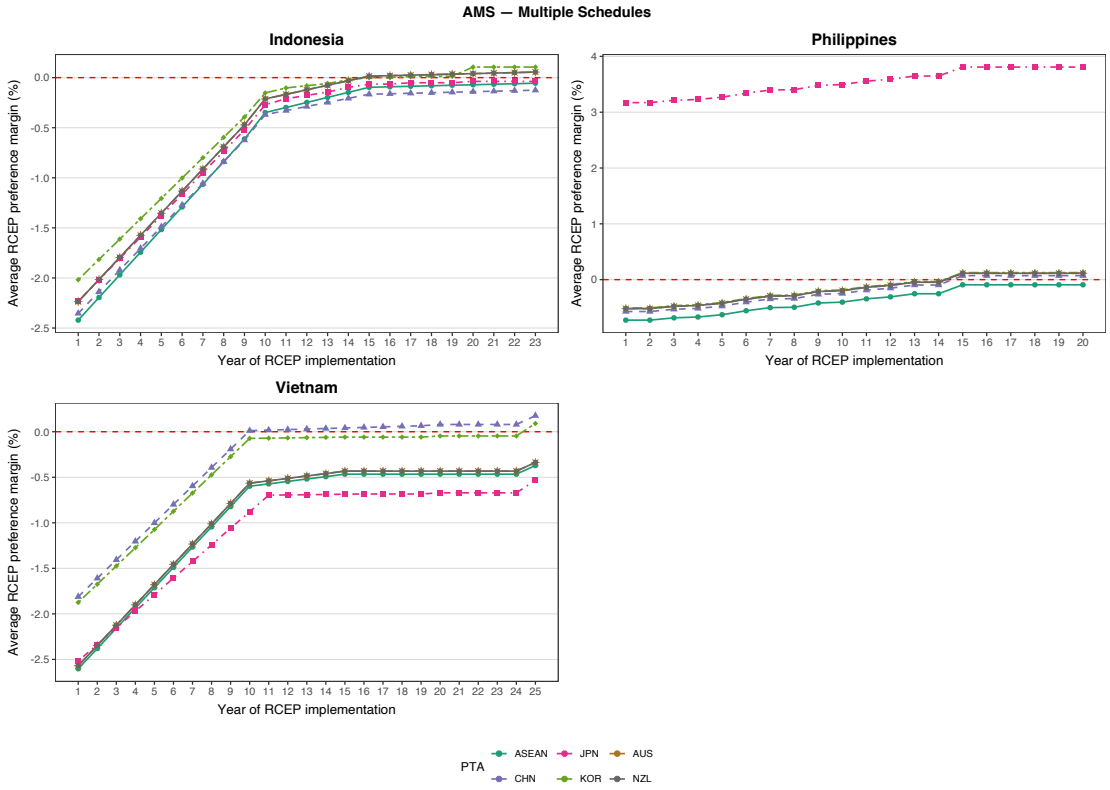
B Time series of RCEP environmental goods preference margins by PTA and country-pair

Figure 8: RCEP Environmental Goods Preference Margin: ASEAN Countries with Single Schedules



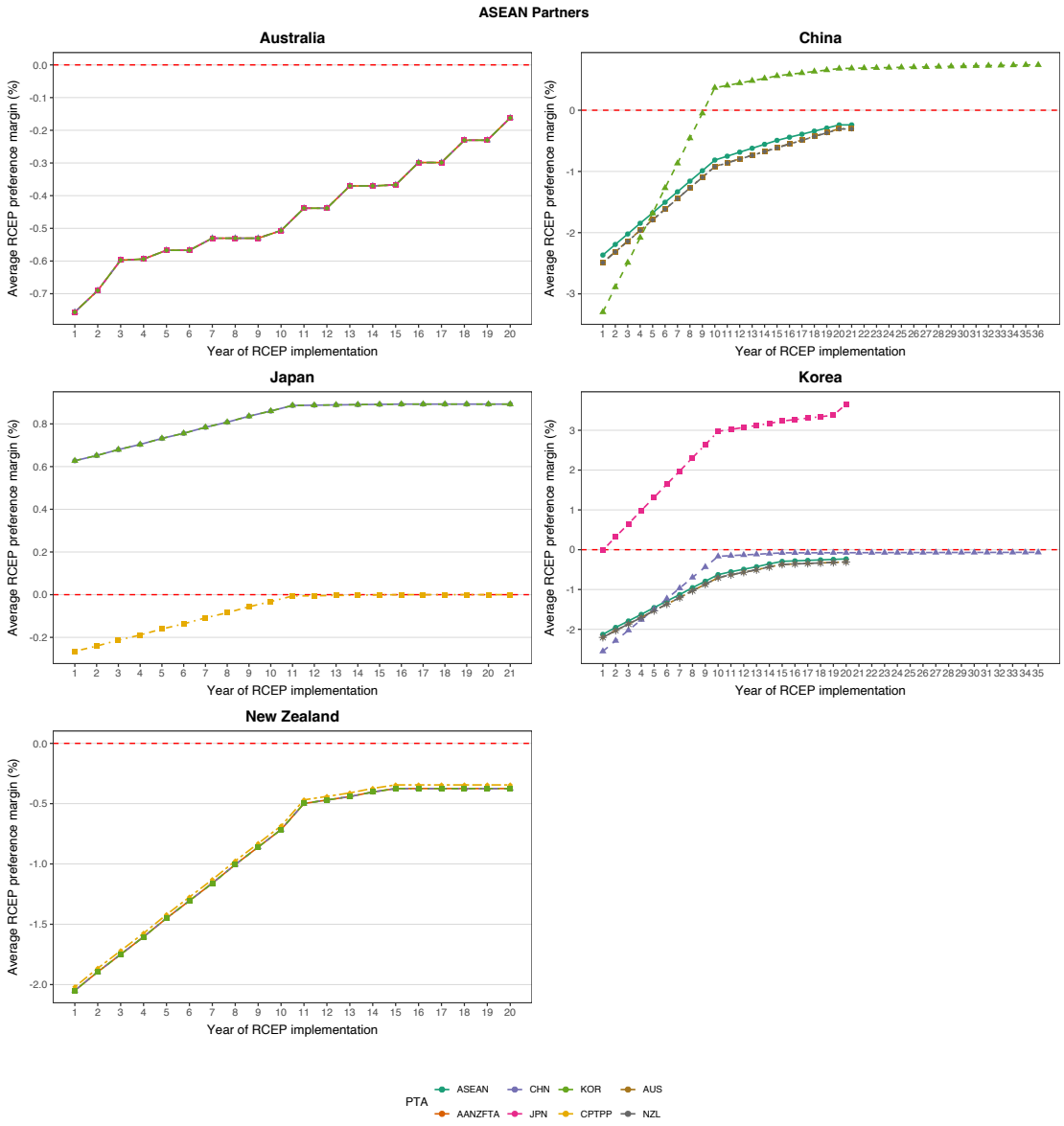
Source: Author's calculations based on tariff schedules, APEC & OECD data.

Figure 9: RCEP Environmental Goods Preference Margin: ASEAN Countries with Multiple Schedules



Source: Author's calculations based on tariff schedules, APEC & OECD data.

Figure 10: RCEP Environmental Goods Preference Margins: ASEAN Dialogue Partners



Source: Author's calculations based on tariff schedules, APEC & OECD data.

C Upgrading RCEP's environmental provisions

Table 8: RCEP Environmental Provisions by Category

Category	Sub-category	Signed countries	Likelihood
Principles	X1.01 Preamble refers to the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X1.10.02 Reference to mutual supportiveness between environment and trade or development	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X1.11 Recognition of a development gap or of different capabilities	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X1.08.01 Sovereignty in determining its own environmental policies according to State priorities	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X1.08.02 Sovereignty in the enforcement of environmental measures	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X1.07.04 Sovereignty over other specific resources	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	66.7%
	X1.09.01 No extraterritorial enforcement activities	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	60.0%
	X1.10.01 Environmental protection as a precondition for trade or development	Australia, China, Japan, New Zealand, Philippines, Republic of Korea, Thailand, Viet Nam	53.3%
	X1.12 Cost benefit analysis	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Singapore, Viet Nam	53.3%

Category	Sub-category	Signed countries	Likelihood
	X1.09.02 No right of action under a Party's domestic law	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Singapore, Viet Nam	46.7%
	X1.04 Precautionary principle	Japan, Singapore, Viet Nam	20.0%
	X1.05 Polluter pays principle	Malaysia, New Zealand, Thailand	20.0%
	X1.07.01 Sovereignty over natural resources in general	Malaysia, Republic of Korea, Viet Nam	20.0%
	X1.07.03 Sovereignty over hydrobiological and fishery resources	China, New Zealand, Republic of Korea	20.0%
	X1.08.04 Other norms on regulatory sovereignty	Japan, Singapore, Thailand	20.0%
	X1.07.02 Sovereignty over genetic resources	Republic of Korea, Viet Nam	13.3%
	X1.03 Prevention principle	Republic of Korea	6.7%
	X1.08.03 Sovereignty or independence of national tribunals in the application of environmental measures	Australia	6.7%
	X1.13 Business actors contribute to environmental protection	Australia	6.7%
	X1.02 Common but differentiated responsibilities principle		0.0%
	X1.06 Damage rectified at source		0.0%
Level of environmental protection	X2.01.02 Inappropriate to encourage investment by relaxing environmental measures	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	80.0%
	X2.04 Not for protectionist purposes	Australia, Brunei Darussalam, China, Japan, Lao People's Democratic Republic, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	80.0%
	X2.01.01 Inappropriate to encourage trade by relaxing environmental measures	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X2.02.01 Laws and regulations should provide for high levels of environmental protection	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%

Category	Sub-category	Signed countries	Likelihood
	X2.02.02 Commitment to enhance, strengthen, or improve levels of environmental protection	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	66.7%
	X2.03 Definition of environmental law, environmental governance, etc.	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X2.01.03 Maintain existing level of environmental protection		0.0%
Law making and policy making	X3.01.01 Scientific knowledge when designing environmental measures	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	73.3%
	X3.02.01 Public participation in the adoption of environmental measures	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Republic of Korea, Singapore, Viet Nam	73.3%
	X3.03.01 Publication of environmental laws, regulations, and administrative rulings	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, Viet Nam	60.0%
	X3.06 Commitment to invest in environmental research and science	Japan, Malaysia, New Zealand, Republic of Korea, Viet Nam	33.3%
	X3.05 Requirement to conduct environmental assessment	Japan, New Zealand, Republic of Korea	20.0%
	X3.01.02 Scientific knowledge when making environmental assessment	New Zealand, Viet Nam	13.3%
	X3.02.02 Public participation in environmental impact assessment	Republic of Korea	6.7%
	X3.04 Commitment to monitor the state of the environment	Viet Nam	6.7%
	X3.03.02 Identification of measures, restrictions, or prohibitions in terms of tariff		0.0%
	X3.07 Establish or support national standard bodies		0.0%
Interaction between non-environmental issues and the environment	X4.13 Interaction between indigenous communities or traditional knowledge and the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%

Category	Sub-category	Signed countries	Likelihood
	X4.02 Coherence with domestic trade or investment policies	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X4.12 Interaction between agriculture and the environment	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X4.03 Interaction between energy policies and the environment	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	80.0%
	X4.07 Interaction between social issues and the environment	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X4.01 Coherence in general	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, Viet Nam	66.7%
	X4.15 Interaction between industrial activities and the environment	Australia, Brunei Darussalam, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Republic of Korea, Singapore, Viet Nam	66.7%
	X4.16 Interaction between transport and the environment	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	66.7%
	X4.05 Interaction between tourism and the environment	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Republic of Korea, Thailand	60.0%
	X4.04 Interaction between mining and the environment	Australia, China, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore	53.3%
	X4.09 Interaction between urban development and the environment	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Singapore, Viet Nam	53.3%
	X4.14 Interaction between human health and the environment	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X4.17 Interaction between other non-environmental issues and the environment	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Thailand, Viet Nam	53.3%

Category	Sub-category	Signed countries	Likelihood
	X4.11 Interaction between construction activities and the environment	Brunei Darussalam, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Singapore	53.3%
	X4.08 Interaction between rural development and the environment	Japan, Singapore, Thailand	20.0%
	X4.10 Interaction between land use planning and the environment	Japan	6.7%
	X4.06 Interaction between gender policies and the environment		0.0%
Enforcement of domestic measures	X5.01.01 Binding obligations	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X5.03 Private access to remedies, procedural guarantees and appropriate sanctions	Australia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, Viet Nam	53.3%
	X5.01.02 Non-binding obligations	Australia, Republic of Korea, Singapore, Viet Nam	26.7%
	X5.04.01 Commitment to consider alleged violation brought by a citizen of any Party	Australia, Singapore, Viet Nam	20.0%
	X5.04.02 Commitment to consider alleged violation brought by foreigners	Australia, Singapore, Viet Nam	20.0%
	X5.05 Cooperation on enforcement	Republic of Korea, Singapore	13.3%
	X5.02 Specific governmental action for enforcement	Singapore	6.7%
	X5.06 Factual report on enforcement		0.0%
Means to encourage environmental protection	X6.02.02 Promotion of specific voluntary measures	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X6.01 Education or public awareness	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X6.02.01 Promotion of unspecified voluntary measures	Australia, Japan, Republic of Korea, Singapore, Viet Nam	33.3%
	X6.03.01 Unspecified economic or market instruments	Australia, China, Republic of Korea, Singapore, Viet Nam	33.3%

Category	Sub-category	Signed countries	Likelihood
	X6.03.02 Specific economic or market instruments	Australia, New Zealand, Republic of Korea, Viet Nam	26.7%
Other cooperation on environmental matters	X7.02.02 Specific means to conduct scientific cooperation	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X7.03.01 General obligation to exchange information related to the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X7.03.02 Specific means to exchange information	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X7.02.01 Conduct joint scientific research	Australia, Brunei Darussalam, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	93.3%
	X7.09 Vague commitments to cooperate	Australia, Brunei Darussalam, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	86.7%
	X7.05 Negotiations of environmental agreements	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	80.0%
	X7.01.02.01 General encouragement	Australia, China, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Viet Nam	53.3%
	X7.03.04 Provision of information when taking measures to protect the environment	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, Viet Nam	60.0%
	X7.02.04 Joint environmental assessment and study or monitoring of environmental concerns	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand	53.3%

Category	Sub-category	Signed countries	Likelihood
	X7.04.01 Harmonization of environmental measures	Australia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand	46.7%
	X7.01.01 Encourage production of environmental goods and services	Australia, China, New Zealand, Republic of Korea, Singapore, Viet Nam	40.0%
	X7.04.04 Mutual recognition	Australia, Malaysia, New Zealand, Republic of Korea, Singapore	33.3%
	X7.04.07 It is not the Party's intention to harmonize their environmental standards	Australia, Japan, Republic of Korea, Singapore, Thailand	33.3%
	X7.02.03 Creation of joint research institutions	Brunei Darussalam, China, Japan, Republic of Korea	26.7%
	X7.03.03 Early notification or exchange of information in case of natural disasters, environmental catastrophes or accidents	Indonesia, Japan, Thailand	20.0%
	X7.03.05 Communication between customs authorities on offenses related to environmental protection	China, Republic of Korea, Singapore	20.0%
	X7.01.02.02 Encouragement for specific goods and services	Japan, Singapore	13.3%
	X7.04.02 Alignment of a Party's legislation to international standards	Republic of Korea	6.7%
	X7.04.03 Avoid exceptional national environmental standards	Singapore	6.7%
	X7.04.05 Harmonization not to be used as a false pretense to lower environmental protection	Republic of Korea	6.7%
	X7.04.06 Possibility to opt out of harmonized environmental norms	Republic of Korea	6.7%
	X7.08 Cooperate in the prevention of deceptive practices	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam	66.7%
	X7.06 Prohibit the export to the other Party of a good whose use is prohibited by that Party on environmental grounds		0.0%

Category	Sub-category	Signed countries	Likelihood
	X7.07 Prohibit the import of environmental good from a Party where its use or export is prohibited by that Party		0.0%
Specific trade-related measures	X8.01.01.01 Necessary	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X8.09.05 Exclusion of environmental sectors from the liberalization of services	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X8.10 SPS measures and the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X8.01.02 Conservation of natural resources	Australia, Brunei Darussalam, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	93.3%
	X8.03.01 General on investment	Australia, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	80.0%
	X8.02.02 Right to prepare, elaborate, adopt or apply TBT measures related to the environment	Australia, China, Japan, Lao People's Democratic Republic, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X8.02.03 Right to derogate from the regular adoption procedure of a TBT measure in case of emergency	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X8.08 Obligation to respect the environment in outward processing zones	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%

Category	Sub-category	Signed countries	Likelihood
	X8.04.01 Exclusion of environmentally harmful inventions from patentability	Australia, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	66.7%
	X8.05.01 General exceptions	Australia, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	66.7%
	X8.09.04 Norms on environmental services	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	66.7%
	X8.03.04 Specific on expropriation	Australia, Indonesia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore	46.7%
	X8.03.06 Right to maintain or adopt any measures in regards of investment in a specific sector	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore	46.7%
	X8.06.01.01 Exceptions allowing agricultural subsidies	Australia, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea	46.7%
	X8.05.02 Technical specifications or restrictions in tender procedure	Australia, Japan, New Zealand, Republic of Korea, Singapore, Viet Nam	40.0%
	X8.09.01 Services on life or health of animal or plant	New Zealand, Republic of Korea, Singapore	20.0%
	X8.09.06 Right to maintain or adopt any measures in regards of a specific sector of services	Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore	40.0%
	X8.11 Exception to the free movement of persons	Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore	40.0%
	X8.03.02 Specific on establishment	Australia, Indonesia, Japan, Republic of Korea, Singapore	33.3%
	X8.03.03 Specific on performance requirements	Australia, Japan, Republic of Korea, Singapore, Viet Nam	33.3%
	X8.03.05 Foreign investment ban from specific sectors related to the environment	Australia, Japan, Malaysia, Republic of Korea, Singapore	33.3%
	X8.04.03 Other norms on intellectual property and the environment	China, New Zealand, Republic of Korea, Singapore	26.7%
	X8.01.03 Protection of the environment	Japan, Philippines, Republic of Korea, Thailand	26.7%
	X8.05.03 Exclusion of specific sectors from procurement liberalization	Australia, Japan, New Zealand, Singapore	26.7%

Category	Sub-category	Signed countries	Likelihood
	X8.09.03 Services on protection of the environment	Australia, China, Republic of Korea, Singapore	26.7%
	X8.01.01.02 Not necessary	Indonesia, Japan, Malaysia	20.0%
	X8.06.01.02 Other norms allowing subsidies	Australia, Singapore, Viet Nam	20.0%
	X8.09.02 Services on conservation of natural resources	Australia, Japan, Singapore	20.0%
	X8.03.07 Exclusion of ISDS	Australia, China	13.3%
	X8.05.04 Cooperation on green public procurement	Republic of Korea, Singapore	13.3%
	X8.06.02 Prevention of subsidies harmful to the environment	Japan, Republic of Korea	13.3%
	X8.02.01 Right to conduct a risk assessment		0.0%
	X8.04.02 Use of geographical indications to protect the environment		0.0%
	X8.07 Safeguard measures on environmental grounds		0.0%
Assistance	X9.01.01 Technical assistance, training or capacity-building provided to another Party	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X9.03.02 Funding of cooperation activities	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X9.02 Technology transfer in the field of environment	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Thailand	66.7%
	X9.01.02 Technical assistance, training or capacity-building provided to non-state actors	Australia, Japan, Malaysia, Republic of Korea, Singapore	33.3%
	X9.04 Emergency assistance in case of natural disaster	Australia, Japan, Republic of Korea, Singapore	26.7%
	X9.03.03 Each Party must fund its implementation of the agreement	China, Republic of Korea	13.3%

Category	Sub-category	Signed countries	Likelihood
	X9.03.04 Funding provided to non-state actors	Philippines, Republic of Korea	13.3%
	X9.05 Capacity-building, training, technology transfer, technical, financial and emergency assistance to third countries	Australia, Viet Nam	13.3%
	X9.03.01 Funding of capacity-building, training, technical assistance and technological transfer	China	6.7%
Specific environmental issues	X10.01.10 Other norms on water	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X10.05.01 Conservation of forests	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X10.17 Air pollution	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X10.01.07 Aquifers, ground water, water table	Australia, Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Thailand, Viet Nam	80.0%
	X10.01.05 Management of rivers, basins and lakes	Australia, Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam	73.3%
	X10.04.01 Conservation of fishery resources	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	66.7%

Category	Sub-category	Signed countries	Likelihood
	X10.14 Biodiversity others	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.15.01.01 Promote renewable production of energy	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.15.01.02 Promote energy efficiency	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.15.02.01 Reduction of GHG emissions	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.22.03 Other norms on disasters	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.23 Domestic waste	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.24.02 Other norms on hazardous waste	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.01.03 Seas and oceans	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%
	X10.12.04 Other norms on genetic resources	Australia, China, Indonesia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	60.0%
	X10.15.02.03 Cooperation on climate change	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, Viet Nam	60.0%
	X10.12.02 Prior informed consent from the appropriate authority when accessing genetic resources	Australia, China, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Viet Nam	53.3%
	X10.12.03 Equitable sharing of benefits arising from use of genetic resources	Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%

Category	Sub-category	Signed countries	Likelihood
	X10.04.02 Sustainable trade in fishery products	Australia, China, Japan, New Zealand, Republic of Korea, Singapore, Viet Nam	46.7%
	X10.04.03 Combat illegal fishing	Australia, China, Japan, New Zealand, Republic of Korea, Singapore, Viet Nam	46.7%
	X10.05.03 Combat illegal exploitation of forests	Australia, China, Japan, Philippines, Republic of Korea, Singapore, Viet Nam	46.7%
	X10.06 Endangered species and their illegal trade	Australia, China, Japan, New Zealand, Republic of Korea, Singapore, Viet Nam	46.7%
	X10.25 Pesticides, fertilizers, toxic products, chemicals	Australia, China, Malaysia, New Zealand, Republic of Korea, Singapore	40.0%
	X10.02 Wetlands	Australia, Malaysia, New Zealand, Singapore, Thailand, Viet Nam	40.0%
	X10.13 Protected areas, parks and natural reserves	Australia, Malaysia, New Zealand, Republic of Korea, Singapore	33.3%
	X10.18 Environmental standards on vehicle emissions	Australia, China, Japan, Philippines, Republic of Korea, Singapore	40.0%
	X10.05.02 Sustainable trade in forestry products	China, Japan, New Zealand, Republic of Korea, Singapore	33.3%
	X10.15.02.05 Other norms on climate change	Australia, Brunei Darussalam, Japan, New Zealand, Republic of Korea	33.3%
	X10.21.01 Biosafety excluding GMOs	Australia, New Zealand, Republic of Korea, Singapore	26.7%
	X10.29 Noise pollution	Australia, China, Malaysia, Philippines, Singapore	33.3%
	X10.30 Scenery preservation	Australia, China, New Zealand, Republic of Korea, Singapore	33.3%
	X10.01.06 Protection of coastal areas	China, Malaysia, Thailand	20.0%
	X10.04.05 Bycatch prevention	Australia, Republic of Korea, Singapore, Viet Nam	26.7%
	X10.11 Shared species	China, Malaysia, New Zealand, Philippines	26.7%
	X10.22.02 Nuclear safety and radiation	Japan, New Zealand, Republic of Korea, Singapore	26.7%
	X10.24.01 Restrictions on export, import or transportation of hazardous waste	Japan, Lao People's Democratic Republic, Philippines, Singapore	26.7%
	X10.31 Other specific environmental issues	Australia, Malaysia, New Zealand, Thailand	26.7%
	X10.04.06 Prevent harmful subsidies	Australia, Singapore, Viet Nam	20.0%

Category	Sub-category	Signed countries	Likelihood
	X10.10 Invasive alien or exotic species	Australia, Singapore, Viet Nam	20.0%
	X10.15.02.02 Climate change adaptation	Australia, New Zealand, Republic of Korea	20.0%
	X10.21.02 Genetically modified organisms	Australia, Republic of Korea, Singapore	20.0%
	X10.01.08 Water efficiency	Australia, Republic of Korea	13.3%
	X10.03 Contaminated land	Japan, Philippines	13.3%
	X10.04.04 Prevent pollution arising from fishing activities	Australia, Republic of Korea	13.3%
	X10.08 Water efficiency	Australia, Singapore	13.3%
	X10.09 Migratory species	Australia, Singapore	13.3%
	X10.12.01 Disclosure of the source of genetic material	China, Malaysia, Philippines	20.0%
	X10.16 Ozone layer and CFC	Australia, Singapore, Viet Nam	20.0%
	X10.26 Organic foods	Australia, Singapore	13.3%
	X10.01.02 Coral reefs	Australia	6.7%
	X10.22.01 Oil spill	Singapore	6.7%
	X10.01.01 Exclusion of water from the agreement		0.0%
	X10.01.04 Management of transboundary waterways		0.0%
	X10.01.09 Marine plastic pollution		0.0%
	X10.07 Wildlife trafficking as a serious crime		0.0%
	X10.15.02.04 Harmonization of legislations related to climate change		0.0%
	X10.19 Soil erosion		0.0%
	X10.20 Desertification, degradation, salinisation and acidification		0.0%
	X10.27 Food waste		0.0%
Implementation of the agreement	X11.01 Contact point on environmental matters	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%

Category	Sub-category	Signed countries	Likelihood
	X11.03.01 Public participation in the implementation of the agreement	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X11.03.02 Direct contact between non-state actors of both Parties	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X11.02.01 Communication on actions undertaken pursuant to this agreement	Australia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	46.7%
	X11.02.02 Commitment to communicate the decisions or recommendations of joint institutions	Australia, New Zealand, Republic of Korea, Singapore, Viet Nam	33.3%
	X11.04 Environmental impact assessment of the agreement	China, Japan, New Zealand, Republic of Korea, Singapore	33.3%
	X11.02.03 Commitment to make available communications received from the public	Republic of Korea, Singapore, Viet Nam	20.0%
	X11.02.04 Public sessions of joint institutions	Australia, Singapore, Viet Nam	20.0%
Institutions created	X12.01 Intergovernmental committee	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X12.03 Stakeholders international committee	Japan	6.7%
	X12.02.01 Establishment of an international secretariat to administer environmental norms of the treaty		0.0%
	X12.02.02 Establishment of specialized organization on specific environmental issue		0.0%
Dispute settlement mechanisms	X13.04.01.01 Preliminary steps before resorting to specific DSM	Australia, New Zealand, Republic of Korea, Singapore, Viet Nam	33.3%

Category	Sub-category	Signed countries	Likelihood
	X13.04.02.01 General DSM procedures	Australia, Japan, Republic of Korea, Singapore, Viet Nam	33.3%
	X13.05.03 Panel shall consult or defer to any relevant body	Japan, New Zealand, Philippines, Republic of Korea, Singapore	33.3%
	X13.01.01 Environmental experts for state-state dispute over failure to enforce environmental measures or other environmental provisions of the trade agreement	Australia, Japan, Singapore, Viet Nam	26.7%
	X13.02.01 Environmental report in state-state dispute over failure to enforce environmental measures or other environmental provisions of the trade agreement	Australia, Japan, Philippines, Singapore	26.7%
	X13.02.03 Environmental report in investor-state dispute	China, Republic of Korea	13.3%
	X13.03.01 Non-jurisdictional mechanism for failure to enforce	Australia, China, Japan, Republic of Korea	26.7%
	X13.01.02 Environmental experts in state-state dispute over trade provisions of the trade agreement	Australia, Republic of Korea, Viet Nam	20.0%
	X13.02.02 Environmental report in state-state dispute over trade provisions of the trade agreement	Malaysia, New Zealand, Republic of Korea	20.0%
	X13.04.01.02 Non-jurisdictional DSM	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam	66.7%
	X13.03.02 Monetary enforcement assessments for failure to enforce	Australia, Singapore	13.3%
	X13.04.02.02 Suspension of benefits	Republic of Korea, Singapore	13.3%
	X13.05.01 Exclusion of multilateral environmental agreements DSM	Japan, Singapore	13.3%
	X13.05.02 Consent to use the DSM of a multilateral environmental agreements	Japan, Singapore	13.3%
	X13.03.03 Suspension of benefits in case of failure to enforce or to pay	Australia, Singapore	13.3%
	X13.04.01.03 State State arbitrage		0.0%

Category	Sub-category	Signed countries	Likelihood
Relations with international institutions	X14.02.12.01 Implementation of the whole treaty	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.02.21 Implementation other agreements related to the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.03.16 Prevalence other agreements related to the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.04.27 Other reference to institutions related to the environment	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.05 Any inconsistency between a trade agreement and any other agreement shall be resolved by consultation	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.07.02 International standards or risk assessments carried out by international organizations should be used or taken into account when designing environmental measures	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%
	X14.07.03 Right to adopt stricter standards than international ones	Australia, Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	100.0%

Category	Sub-category	Signed countries	Likelihood
	X14.07.04 Party should use methods of risk assessment developed by international organizations	Australia, Brunei Darussalam, China, Indonesia, Japan, Malaysia, Myanmar, New Zealand, Philippines, Republic of Korea, Singapore, Thailand	80.0%
	X14.02.01.01 Implementation of the whole treaty	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.02.01.02 Implementation of a specific part	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.02.02.01 Implementation of the whole treaty	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.02.04.01 Implementation of the whole treaty	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.04.02 Other reference to Montreal Protocol	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.04.04 Other reference to MARPOL	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.07.01 International standards are presumed to be in conformity with the trade agreement's obligations	Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Viet Nam	53.3%
	X14.04.18 Other reference to Agenda 21 of 1992	China, Japan, Philippines, Republic of Korea, Singapore, Viet Nam	40.0%
	X14.04.20 Other reference to Johannesburg Plan of Implementation 2002	China, Japan, Philippines, Republic of Korea, Singapore, Viet Nam	40.0%
	X14.02.10.01 Implementation of the whole treaty	Australia, Japan, Republic of Korea, Singapore, Viet Nam	33.3%
	X14.02.11.01 Implementation of the whole treaty	Japan, Republic of Korea, Singapore, Thailand, Viet Nam	33.3%
	X14.04.01 Other reference to CITES	Japan, Philippines, Republic of Korea, Singapore, Viet Nam	33.3%
	X14.04.10 Other reference to UNFCCC	Japan, Republic of Korea, Singapore, Thailand, Viet Nam	33.3%
	X14.04.21 Other reference to Rio+20 outcome document	China, Japan, Philippines, Republic of Korea, Viet Nam	33.3%
	X14.02.16 Implementation Rio declaration of 1992	Australia, China, Malaysia, New Zealand	26.7%

Category	Sub-category	Signed countries	Likelihood
	X14.02.17 Implementation Agenda 21 of 1992	Australia, China, Malaysia, New Zealand	26.7%
	X14.02.18 Implementation Johannesburg declaration of 2002	Australia, China, Malaysia, New Zealand	26.7%
	X14.04.12 Other reference to CBD	China, Japan, Republic of Korea, Viet Nam	26.7%
	X14.04.22 Other reference to UNEP	New Zealand, Republic of Korea, Singapore, Viet Nam	26.7%
	X14.01.16 Ratification other agreements related to the environment	Republic of Korea, Singapore, Viet Nam	20.0%
	X14.04.11 Other reference to Kyoto Protocol	Japan, Singapore, Thailand	20.0%
	X14.04.15 Other reference to Stockholm Declaration	China, Philippines, Republic of Korea	20.0%
	X14.04.17 Other reference to Rio Declaration of 1992	China, Philippines, Republic of Korea	20.0%
	X14.02.14.01 Implementation of the whole treaty	China, Republic of Korea	13.3%
	X14.02.20 Implementation Paris Climate Agreement	Japan, Singapore	13.3%
	X14.03.03 Prevalence Basel Convention	Japan, Republic of Korea	13.3%
	X14.04.03 Other reference to Basel Convention	Australia, New Zealand	13.3%
	X14.04.14 Other reference to Nagoya Protocol	Philippines, Republic of Korea	13.3%
	X14.04.25 Other reference to Agenda 2030 or Sustainable Development Goals	China, Japan	13.3%
	X14.06 Prevalence of the trade agreement in case of inconsistency with any other agreement	Republic of Korea, Singapore	13.3%
	X14.02.07.01 Implementation of the whole treaty	Republic of Korea	6.7%
	X14.02.08.01 Implementation of the whole treaty	Republic of Korea	6.7%
	X14.02.09.01 Implementation of the whole treaty	Republic of Korea	6.7%
	X14.02.12.02 Implementation of a specific part	Republic of Korea	6.7%
	X14.02.15 Implementation Stockholm declaration	China	6.7%

Category	Sub-category	Signed countries	Likelihood
	X14.03.01 Prevalence CITES	Republic of Korea	6.7%
	X14.03.02 Prevalence Montreal Protocol	Republic of Korea	6.7%
	X14.03.04 Prevalence MARPOL	Republic of Korea	6.7%
	X14.03.05 Prevalence Rotterdam Convention	Republic of Korea	6.7%
	X14.03.06 Prevalence Stockholm Convention	Republic of Korea	6.7%
	X14.03.07 Prevalence Ramsar Convention	Republic of Korea	6.7%
	X14.03.08 Prevalence CCAMLR	Republic of Korea	6.7%
	X14.03.09 Prevalence International Convention for the Regulation of Whaling	Republic of Korea	6.7%
	X14.03.12 Prevalence CBD	Republic of Korea	6.7%
	X14.04.07 Other reference to RAMSAR Convention	Republic of Korea	6.7%
	X14.04.08 Other reference to CCAMLR	Republic of Korea	6.7%
	X14.04.09 Other reference to Whaling Convention	Republic of Korea	6.7%
	X14.04.19 Other reference to Johannesburg Declaration 2002	Republic of Korea	6.7%
	X14.04.24 Other reference to REDD	Viet Nam	6.7%
	X14.01.02 Ratification Montreal Protocol		0.0%
	X14.01.03 Ratification Basel Convention		0.0%
	X14.01.05 Ratification Rotterdam Convention		0.0%
	X14.01.10 Ratification UNFCCC		0.0%
	X14.01.11 Ratification Kyoto Protocol		0.0%
	X14.01.12 Ratification CBD		0.0%
	X14.02.02.02 Implementation of a specific part		0.0%
	X14.02.03.01 Implementation of the whole treaty		0.0%
	X14.02.05.01 Implementation of the whole treaty		0.0%
	X14.02.05.02 Implementation of a specific part		0.0%

Category	Sub-category	Signed countries	Likelihood
	X14.02.06.01 Implementation of the whole treaty		0.0%
	X14.02.11.02 Implementation of a specific part		0.0%
	X14.02.13.01 Implementation of the whole treaty		0.0%
	X14.02.19 Implementation 2030 Agenda or Sustainable Development Goals		0.0%
	X14.03.11 Prevalence Kyoto Protocol		0.0%
	X14.03.13 Prevalence Cartagena Protocol		0.0%
	X14.04.06 Other reference to Stockholm Convention		0.0%
	X14.04.26 Other reference to Paris Climate Agreement		0.0%
Other environmental norms	X15 Other environmental norms	Australia, Brunei Darussalam, China, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam	73.3%