

Analytical Report

CTI Initiative on Exploring interoperability in APEC approaches on Green Finance and Sustainability Investing

APEC Committee on Trade and Investment

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Economic Cooperation**



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I. INTRODUCTION

In the context of CTI efforts on promoting sustainable agenda, Russia proposed an initiative on exploring interoperability in APEC economies' approaches on green finance. The main goal of the initiative is to provide research on the current state of regulatory frameworks alignment in the APEC region. Key tasks to date have included:

- Designing a survey questionnaire with a broad scope of topics centred around the green finance regulatory frameworks
- Distributing the survey among CTI member economies
- Analysing survey results
- Preparing the Analytical Report

II. BACKGROUND

Green Finance and Sustainable Investing are essential for implementing Putrajaya Vision 2040 that aims at “promoting economic growth which supports global efforts to comprehensively address all environmental challenges, including climate change, extreme weather and natural disasters, for a sustainable planet”. The capital intensity of green technologies and high cost of their adoption necessitate significant financing. The International Energy Agency asserts that annual investments in energy technologies and efficiency need to be between USD0,6-1 trillion¹. The BCG research corroborates the need for financing instruments showing an USD18 trillion capital gap in funding².

The demand for Environmental, Social and Governance (ESG)-related financial assets is growing consistently as the sustainable agenda gains momentum. Constant evolution of principles underlying the marking of ESG-related finance brings best practices to actual business operations aimed at improving sustainability efficiency. At the same time, with no or modest efforts to improve coherence of these principles, such evolution contributes to regulatory fragmentation and, therefore, poses a rising challenge for the investment flows facilitation in the Asia-Pacific region.

¹ Financing clean energy transitions in emerging and developing economies // International Energy Agency. URL: <https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies#overview>

² \$18 Trillion Capital Gap Is Threatening the Green Energy Transition // Boston Consulting Group. URL: <https://www.bcg.com/press/20november2023-18-trillion-capital-gap-threatening-the-green-energy-transition>

Developed and effective sustainable and green taxonomy frameworks can establish transparent, well-functioning and attractive procedures for qualifying investment with “sustainable” and “green” labels. Addressing environmental challenges, including climate change, extreme weather and natural disasters, for promoting sustainable economic growth is aligned with the APEC Putrajaya Vision 2040 goal of “Strong, Balanced, Secure, Sustainable and Inclusive Growth”. Enhancing comparability and interoperability across different alignment approaches among APEC economies might serve as a baseline for facilitating international investment for the promotion of environmentally sustainable economic growth.

III. SURVEY DETAILS

The 37-questions survey covers four aspects – general understanding of definitions in the sphere of green finance; application of taxonomy or other alignment approaches; composition of taxonomy or other alignment approaches; impact of taxonomy or other alignment approaches. The survey was shared with the CTI member economies. Ten responses have been received (Chile; People’s Republic of China “PRC”; Hong Kong, China; Indonesia; Malaysia; Mexico; the Philippines; Russia; Chinese Taipei; Thailand).

Table 1: Survey responses

Total distribution	Total responses	Percentage response rate
21	10	48%

The Russian CTI team is analysing the methodological aspect of the survey for possible future work. The initiative keeps an open door for continuing the research and taking additional steps to improve understanding of interoperability in APEC approaches on Green Finance and Sustainable Investing. Based on the responses collected as of now, the key results are provided below.

IV. KEY FINDINGS

Two approaches to the green finance

APEC economies diverge in their approaches to the finance connected with sustainable economic growth. “Green finance” or “green and sustainable finance” as a separate term is used in responses of the PRC; Hong Kong, China; Malaysia;

Russia; and Thailand. The approaches by these economies tend to focus on the financial products and services, which benefit environmentally sustainable economic growth and facilitate the transition to a low carbon economy. Special attention is given to a better management of environmental opportunities and risks. Russia has an in-depth separation between green finance (for green projects, which meet the international taxonomies standards) and adaptation finance (for projects, which align with domestic climate priorities).

Another group of economies does not target “green finance” separately for regulatory purposes, but treats them as a part of a broader class of sustainable finance. Among such economies, Indonesia; Mexico; and the Philippines are distinguished. They incorporate not only environmental, but also social or/and governance issues into the ecosystem of “sustainable” policies, regulations, standards, products, and services.

The rest of participating economies informed of not having an officially accepted definition of “green finance”, but emphasized the importance of encouraging economic agents to incorporate environmental sustainability priorities into their activities.

The difference in approaches condition the divergent identification of the most important issues for moving towards sustainable investment and green finance. Economies with a more focused definition mostly highlight issues in the scope of the green agenda: greenwashing, existence of key eco-system enablers, availability and accessibility of climate-related data, improvement of the green finance standard system. The economies using a broader definition put environmental protection and sustainability into a complex context of social problems, demanding regulatory frameworks and policies: fostering collaboration among government agencies and authorities, financial institutions, businesses, civil society and international partners; encouraging local investors and MSMEs; enhancing market awareness. Moreover, some economies highlighted the necessity to facilitate transparent, standardized, and interoperable data and develop a framework to assess the sustainable finance associated impact.

Green finance instruments and taxonomies

Key types of green finance instruments in the APEC economies generally include green and sustainability-linked loans as well as bonds and Shariah-compliant sukuk instruments. The exact design of these instruments varies among economies and include, inter alia, mortgage-backed securities in Russia. Besides, Malaysia has introduced The Sustainable and Responsible Investment (SRI) Sukuk Framework;

while the Philippines – Sustainable Finance Framework. The broad range of instruments is available in the PRC, including green stock indexes, green development funds, and green insurance.

The development of the green finance instruments demands the implementation of regulatory frameworks for the qualification criteria. Some of the APEC economies (the PRC; Hong Kong, China; Indonesia; Malaysia; Mexico; the Philippines; Russia; Chinese Taipei; Thailand) have already introduced their green/sustainable taxonomy, while Chile has plans to do so.

By implementing green taxonomy economies set criteria for defining what can be called “green/sustainable” investments. In the PRC; Indonesia; Malaysia; the Philippines; and Russia, no green instrument can be issued without compliance with the domestic alignment norms³. Several economies implement principle-based approach for their green finance regulations (Indonesia; the Philippines), which means they set outcomes and principles, while the controls, measures and procedures on how to achieve the outcomes are left for the business sector to determine. At the same time the PRC and Chinese Taipei use sectorial transitional pathway: they set trajectories for reducing CO2 emissions by industry until domestic emissions targets are reached and try to identify the initiatives needed to achieve these targets. The PRC sets criteria for defining what can be called sustainable investments and Thailand sets what is environmentally-sustainable activities under the transitional/green taxonomy.

Such approaches are mostly promulgated at the level of stock exchange/central bank regulations with some exceptions (e.g., In Thailand, the taxonomy has not yet been formally endorsed by the government).

In taxonomy development/implementation, a group of economies uses the ASEAN Taxonomy for Sustainable Finance as a foundation, which also refers to the European Green Taxonomy where possible (Indonesia; the Philippines; Thailand). The taxonomy of Hong Kong, China is developed based on the Common Ground Taxonomy, and hence aligns with the European Union Green Taxonomy, as well as the PRC’s Green Bond Endorsed Projects Catalogue. The PRC itself cooperates with the European Commission on completion of Sustainable Finance Common Ground Taxonomy. The Chile’s approaches follow the progress of common taxonomy framework of Latin America and Caribbean, as well as of International Platform on Sustainable Finance. The Russian taxonomy is built upon the domestic experience.

³ The first iteration of the Philippine Sustainable Finance Taxonomy Guidelines only covers climate change mitigation and adaptation.

Government stimulus for green finance

Economies which completed the survey have different kinds of government support and incentives to promote green finance and projects. For example, Malaysia provides tax preferences such as Green Investment Tax Allowance and Green Income Tax Exemption. The PRC introduced special monetary policy tools to provide low-cost financial support, as well as regulatory stimulus. Some local governments in the PRC also provide fiscal subsidies for green loans and green bonds. Indonesia has a system of listing fee discount for green bonds, as well as some stimuli in risk-weighted assets regulations. Hong Kong, China provides funding support for eligible green and sustainable bond issuers and loan borrowers to cover part of their expenses on bond issuance and external review services. Moreover, HKC's Exchange Fund implements guiding principle that prioritizes ESG investments if long-term risk-adjusted return is comparable to other investments. Thailand is granting an annual fee reduction for listed companies equal to greenhouse gases (GHGs) emissions verification fees and consulting fees until 2025. Existing the Philippines guidelines that incentivize banks to finance green or sustainable projects are as follows:

- Exclusion from the large exposures monitoring threshold, if the sustainable projects are funded through project finance as defined in the existing BSP regulations;
- Recognition of sustainable finance as one of the eligible modes of compliance with the mandatory credit to agriculture, fisheries, and rural development;
- Temporary 15 percent increase in the Single Borrower's Limit (SBL) of banks to extend loans or finance investments for eligible green or sustainable projects or activities, including transitional activities, for a period of two years;
- Gradual reduction of reserve requirement rate (RRR) to 0 percent against sustainable bonds issued by banks, for a period of two years.

Principles of green finance frameworks

Divergent experience of APEC economies in working with green finance has shaped seminal features of applied frameworks, especially in the fields of validation procedures, emission benchmarks, technological development relations, and specific requirements.

Chile; the PRC; Indonesia; Mexico; the Philippines; Russia; Chinese Taipei; and Thailand have a rule of a second party validation. In Indonesia, this rule applies to

the pre-issuance and annually conducted assessment procedures; in Chile; the Philippines; and Chinese Taipei to the bond issuance; in Thailand to the SLB issuance through public offering and private placement to high-net-worth/ultra-high-net-worth investors; in the PRC and Russia – to the pre-issuance, as well as post-issuance, while also to annual assessments in the Russian Federation.

Chile; Indonesia; Russia; and Thailand (for green category) are applying global paths to net zero benchmark. Chile and Russia also use domestic scale benchmark of top 10-20% of GHG-efficient units. The Philippines and Thailand (for amber category for transition activity) counts GHG emissions per their local “Nationally Determined Contribution” (NDC), while Mexico has the benchmarks aligned with its NDC and Paris Agreement goals commitments.

Green finance regulations of the PRC; Indonesia; Chinese Taipei are technology-specific. It means that there are domestic technological priorities that are outlined in the taxonomy or other alignment approaches.

Chile; the PRC; Indonesia; Malaysia; Mexico; the Philippines; Russia; Chinese Taipei; and Thailand have Do No Significant Harm (DNSH) and/or Minimum Social Safeguards (MSS) requirements.

Spheres of Green Taxonomy and the scope of application

Among specific spheres of green and sustainable approaches application shared by the economies waste management, energy, construction and housing, transportation can be pointed out. The PRC; Indonesia; Malaysia also highlight biodiversity conservation and agriculture, while the Philippines also include fisheries and tourism. Russia has one of the broadest lists with fisheries included, while Indonesia also covers tourism. The PRC also includes green upgrade of infrastructure and green services. The Mexico Taxonomy provides a catalog of 124 activities distributed in six strategic sectors of the economy: Agriculture and forestry; Energy and water; Manufacturing; Transportation; Construction; and Waste management.

Economies have different criteria of eligibility in their approaches to the green finance. In the segment of the natural gas generation, Indonesia allows green labeling of gas projects without specific quantitative emission threshold, while Russia allows only projects where emissions stay below the threshold of 100g CO₂ per kW*h. Thailand targets the threshold of 100g CO₂/kW*h for “green” criteria, while projects where emissions exceed 100g CO₂/kW*h but is still below a certain threshold are eligible for “amber” (“transitional”) criteria. Nuclear power projects are eligible for the taxonomy assessment in the PRC; and Russia. Among the

economies, which completed the survey, Russian taxonomy allows hydrogen, but only green, blue, and pink ones; while the PRC allows only the green one. Thailand taxonomy is technology neutral so it does not explicitly exclude any type of hydrogen, except fossil fuel based hydrogen. As long as the activity meets GHG intensity threshold and relevant criteria, it could be considered as aligned with the taxonomy. The Philippines Guidelines on the Issuance of Green, Social and Sustainability Bonds provide broad categories of eligible projects; that is why gas, nuclear and hydrogen projects are eligible.

Mexico's Sustainable Taxonomy, initially optional for issuers, credit institutions and investors, led to the development of specific regulations to enhance disclosure, implementation, and mobilization of sustainable capital.

The volumes of green finance in the APEC economies are already significant. In 2022, they were estimated at the level of USD6.4 billion in Russia; USD2.3 billion in the Philippines⁴ (USD3.55 billion as for July of 2023)⁵; USD17 billion of green/sustainability bond and SLB issuance in Thailand; USD3.48 billion in private global green/sustainable bonds and USD6.9 billion in recorded cumulative value of government's green bonds/sukuk in Indonesia. By the end of 2022, the PRC' green loan balance was RMB22.03 trillion (USD3,05 trillion), green bond balance was RMB 1.36 trillion (USD0,19 trillion). The cumulative use of the carbon-reduction supporting tool has led to over RMB300 billion (USD41,6 billion) in refinancing.

Russia also highlighted the total estimated environmental impact of all the financial instruments issued – 10.5 million tons of CO₂ (approximately 1% of Russia's annual emissions).

The greenium (an interest rate spread between green bonds and conventional bonds) is observed in Chile (in average 5bn on green bonds) and Russia (the latest statistical data is available for 2021, when it was 10-15 bps).

V. CONCLUSION

APEC economies share common goals of climate change consequences mitigation, environmental protection and sustainable economic growth, but paths towards reaching them are different.

⁴ As of the 31 March 2022: <https://business.inquirer.net/360548/ph-borrowings-via-green-bonds-on-the-rise>

⁵ <https://www.treasury.gov.ph/wp-content/uploads/2023/10/Sustainable-Bond-Report-and-DNV-External-Review.pdf>

The convergence of the economies' approaches to green finance and sustainable investing can be a way to achieve higher efficiency of policies applied in the Asia-Pacific. Some regional economies are taking steps towards the interoperability of their taxonomies with the ASEAN standards. Others are building their unique systems with special attention to domestic needs and experiences.

The analysis shows that APEC economies have common financial instruments that are eligible for the green qualification. The promotion of interoperability can be conducted through rapprochement between the green criteria for bonds and loans among economies in order to create transparent environment for foreign investors and facilitate investment flows in the region.

ANNEX 1 : SURVEY QUESTIONNAIRE

SECTION 1: GENERAL QUESTIONS

1. What definition of “green finance” does your economy use? What is the scope of the term?

2. What is the most important issue that needs to be addressed to move towards sustainable investments and green finance?

3. Which financial instruments are developed in your economy to support transition to green economy?

4. Does your economy implement measures that prevent greenwashing? If yes, please describe them.

5. Does your economy have a domestic green taxonomy or other alignment approaches for financial instruments?
 - Yes
 - No, but there are short- or mid-term plans to develop one
 - No
6. What investments qualify under green taxonomy or other alignment approaches in your economy?

7. What approach to green transition finance is used in your economy (choose several options, if applicable)?
 - principle-based approach (to set outcomes and principles, while the controls, measures and procedures on how to achieve the outcomes is left for the business to determine)
 - sectorial transitional pathway (to set trajectories for reducing CO2 emissions by industry until domestic emission targets are reached and to identify the initiatives needed to achieve these targets)
 - transitional/green taxonomy (to set criteria for defining what can be called sustainable investments)
 - other (please, specify)

8. At what level is it approved?

- Law
- Government decree
- Stock exchange / central bank regulations
- No formal governmental approval

9. Is it mandatory for all issuers / borrowers?

- Yes, no green instrument can be issued without compliance with the domestic taxonomy or other alignment approaches
- No, international voluntary standards (ICMA/CBI⁶) can also be used
- No regulations on this matter

10. Who leads the taskforce on the development of the domestic taxonomy or other alignment approaches?

- Central Bank or equivalent
 - Ministry of Finance / Economy or equivalent
 - Ministry of Ecology / Climate or equivalent
 - Professional associations
 - Other (please, specify)
-

11. Does your economy have domestic green bond/loan framework?

- Yes
- No

12. What overarching framework are your taxonomy or other alignment approaches aligned with?

- Paris Agreement
 - Nationally Determined Contribution
 - Other (please, specify)
-

13. What objectives do your taxonomy or other alignment approaches include?

- Mitigation only
 - Mitigation and adaption/resilience
 - Other (please, specify)
-

14. Is your economy undergoing any kind of common grounds taxonomy development effort on a regional / international level?

- Yes (please, specify)

⁶ The International Capital Market Association/Climate Bonds Initiative

No

15. Does your economy undertake any steps to harmonize your approach with other APEC economies?

16. What could be done in order to harmonize alignment approaches in APEC region?

17. What existing projects or initiatives could help to harmonize alignment approaches in APEC region?

SECTION 2: TAXONOMY OR OTHER ALIGNMENT APPROACHES APPLICATION

18. Which form do taxonomy or other alignment approaches application take?

- Financial instruments labeling
 - Disclosures
 - Insurance and pension funds allocation
 - Statistics and data collection
 - Stimulus application
 - Industrial policy
 - Doesn't have a particular application, serves as market guidance tool
 - Other (please, specify)
-

19. What financial instruments does your taxonomy or other alignment approaches cover?

- Bonds
 - Loans
 - Other instruments (guarantees, derivatives, ETFs, etc.; please specify)
-

20. Does issuing a green financial instrument require an independent verification / certification / second party opinion?

- Yes
- No

21. How often do the taxonomy or other alignment approaches require independent verification of the green status of a financial instrument?

- Pre-issuance

- Post-issuance
 - Annually
 - Other (please, specify)
-

22. Are there any green label validation disclosure requirements?
- Yes, all green label validations and second party opinions must be public
 - No, at issuers' discretion
23. Is an issuer required to disclose specific projects and their environmental impact they are willing to direct the proceeds towards?
- Yes
 - No, compliance to taxonomy or other alignment approaches is enough
24. Do your domestic green taxonomy or other alignment approaches have a DNSH (Do No Significant Harm) requirement and/or MSS (Minimum Social Safeguards)?
- Yes
 - No
25. What was the principle behind CO₂ (or CO₂ equivalent) benchmarks development?
- Global paths to net zero benchmarks
 - Top 10-20% of GHG-efficient units (domestic scale)
 - Other benchmarks
 - Taxonomy or other alignment approaches do not have CO₂ (or CO₂ equivalent) benchmarks
26. Are your taxonomy or other alignment approaches technology-specific?
- No, it is technology-neutral as long as issuers comply with GHG benchmarks
 - Yes, there are domestic technological priorities that are outlined in the taxonomy or other alignment approaches
 - Not applicable
27. Do your taxonomy and/or green bond/loan framework include a grandfathering clause? What is the scope of application of this "grandfathering clause"?
- Yes
 - No
-
28. Is there any kind of government support / stimulus for green financial instruments?
- Coupon subsidies
 - Tax preferences
 - Regulatory stimulus (Risk-weighted assets regulations, central bank REPO list, etc.)

- Share of green financial instruments holding requirements for banks / pension funds / insurance companies
 - Other (please, specify)
 - No stimulus available
-

SECTION 3: TAXONOMY OR OTHER ALIGNMENT APPROACHES COMPOSITION

29. Which of the following industries do your taxonomy or other alignment approaches cover?

- Waste management
 - Energy
 - Construction and housing
 - Industry (metals, chemicals, fertilizers, cement, etc.)
 - Transportation
 - Water supply and sanitation
 - Biodiversity conservation
 - Agriculture
 - Other (please, specify)
 - None of the above
-

30. Do your taxonomy or other alignment approaches allow for thermal utilization of waste?

- Yes
- No

31. Do your taxonomy or other alignment approaches allow for natural gas generation?

- No
 - Yes, but within a 100g CO₂/kW*h threshold (assumes CCUS)
 - Yes, with a threshold exceeding 100g CO₂/kW*h
 - Other (please, specify)
-

32. Do your taxonomy or other alignment approaches allow for nuclear power?

- Yes
- No

33. What kind of hydrogen do your taxonomy or other alignment approaches allow for?

- Green (electrolysis, renewables, zero emissions)
- Pink (electrolysis, nuclear, zero emissions)
- Blue (SMR, fossil fuels, CCUS, ~0.7kg CO₂/kg)

- Turquoise (methane pyrolysis, grid electricity, ~8kg CO₂/kg)
 - Grey (SMR, fossil fuels, no CCUS, ~8.5kg CO₂/kg)
 - Black/Brown (coal gasification, 12-17kg CO₂/kg)
 - Yellow (electrolysis, grid electricity, 21-25kg CO₂/kg)
 - Other (please, specify)
 - Does not allow for hydrogen
-

SECTION 4: TAXONOMY OR OTHER ALIGNMENT APPROACHES IMPACT

34. What is the volume of financial instruments issued in compliance with your taxonomy or other alignment approaches as of 31 December 2023, and the latest data available?

35. What is the total estimated environmental impact (current and forecasted) of all the financial instruments issued (what is the amount of GHG sequestered or emissions avoided as a result of taxonomy or other alignment approaches application)?

36. Is there an observed “greenium” (an interest rate spread between similar green and plain vanilla bonds) on your financial markets?

37. What is the price of decarbonizing 1 ton of GHG using green financial instruments issued in compliance with you taxonomy or other alignment approaches?
