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Report for APEC Policy Discussions: Trade-Related Policies to Promote Trade in Environmental Products and Technologies Including Regulatory Issues, Contributing to Global Carbon Neutrality (Endorsed, 4 Jan 2022)

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APEC Policy Discussions : Trade-related Policies to Promote Trade in Environmental Products and Technologies including Regulatory Issues, Contributing to Global Carbon Neutrality

9 September 2021

REPORT

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1 Executive Summary

The Paris Agreement calls for achieving a balance between anthropogenic emissions by sources and removals by sinks of Green House Gases (GHG) in the second half of this century. Working towards the goal of global carbon neutrality, international trade is one of the key elements which can facilitate and accelerate the wide spread of products and technologies which contribute to emission reductions. In addition to discussion on environmental goods and services, which already been taken up in other fora within APEC, approaches related to non-tariff trade policy issues to facilitate transactions from production to consumption, and to prevent arbitrary trade obstacles from being introduced in the future, are especially important to achieve carbon neutrality, to not only utilize existing products and technologies, but also newly develop and globally spread innovative products and technologies.

From this viewpoint, APEC held a policy dialogue virtually on September 9, 2021 to discuss and identify possible approaches to address trade related policies relating to products and technologies which contribute to GHG emission reduction in an open-ended manner. The event featured experts and stakeholders from the APEC region, with diverse backgrounds on trade and environment policy and expertise in specific areas of new emerging technologies. After a brief introductory session, the speakers delivered four presentations in which their perspective on regulatory issues related to trade in environmental products and technologies, followed by a Q&A session.

The policy discussion was attended by 71 participants from 16 APEC member economies and observer organizations. The details of the speakers are as follows:

・Ms. Mari Shimizu
Director of Legal Affairs, International Legal Affairs Office/WTO Compliance and Dispute Settlement Office, Ministry of Economy, Trade and Industry)

・Dr. Emma Aisbett
Associate Director, Research, Zero-Carbon Energy for the Asia-Pacific Grand Challenge & Fellow, School of Regulation and Global Governance, Australian National University

・Ms. Kristen Bondietti
Director – Trade Agreements, Article Three; and Senior Trade Adviser - Australian APEC Study Centre, RMIT University

・Mr. Tim Karlsson
Executive Director, International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE) Secretariat

・Mr. Ryo Chishiro
Manager, Kawasaki Heavy Industries

2 Event Summary

2.1 Introductory Session

2.1.1 Opening Remarks

Opening remarks were delivered by Mr. Takaaki Sashida, Principal Deputy Director of the Multilateral Trade System Department at Japan's Ministry of Economy, Trade and Industry (METI). Mr. Sashida welcomed the audience and introduced the agenda for the policy discussion, which would begin with a presentation from Japan on the background for proposing the discussion, followed by presentations by four guest speakers, a Q&A session, and discussions among APEC economies on initial thoughts regarding non-tariff barriers.

2.1.2 Introductory Presentation

Ms. Mari Shimizu, Director of Legal Affairs, International Legal Affairs Office/WTO Compliance and Dispute Settlement Office at METI, delivered the introductory presentation on the background and core elements of the Japan's policy discussion proposal approved in June.

This policy discussion was focused on promoting products and technology that would contribute to achieving carbon neutrality. There are both tariff and non-tariff approaches to this. On tariff approaches, there are already existing undertakings such as the APEC Leaders' commitment in 2012 to reduce tariffs for the list of environmental goods. On the other hand, regarding non-tariff trade policy issues, there have not been holistic international discussions, including in APEC. Thus, Japan proposed to initiate open-ended discussions on possible non-tariff approaches.

Japan suggested 4 general types of issues and measures to promote trade and development in environmental products and technologies: "research and development", "facilitating dissemination and trade of environmental goods and technologies", "building resilient supply chains" and "enhancing accountability and transparency of domestic measures". Further specific elements and ideas were introduced, including some based on experiences from existing related provisions in Economic Partnership Agreements (EPAs) and FTAs, as well as Japan's own domestic policies.

In conclusion, Ms. Shimizu noted that there are already existing rules and measures that could serve as examples to facilitate the widespread use of environmental goods and technologies. But first we need to further identify issues for such goods to be developed. The next step would be to think about what approaches can be taken to encourage APEC economies to adopt mutually beneficial policies in this area.

2.2.1 Presentation by Dr. Emma Aisbett (Australian National University)
"Regulating trade in a net-zero world"

Dr. Aisbett began by noting the need to change quickly if we are to avoid catastrophic climate change as a widely held consensus. Today's economy is global, and no economy will achieve net-zero emissions unless emissions embedded in traded goods and services are addressed. As individual economies try to decrease emissions within their borders, they are going to increasingly find competitiveness and leakage concerns, driving trade policy changes.

"Trade-related climate policy" addresses the range of policies nominally to support climate objectives which have trade and trade policy consequences. The biggest examples on the international agenda include Carbon Border Adjustment Mechanisms, and "Green" and "low emissions" certification schemes. Preferential green goods liberalization is also an example of trade-related climate policy, as well as linked emissions trading schemes and frameworks for trade in negative emissions services.

Trade-related climate policies are essential if we are to avoid climate change because we need to address emissions embedded in international trade. There are complex public and private regulatory regimes already emerging for some products. It is important to make sure the trading system is both fair and efficient, so that we don't see the emergence of excessive regulatory complexity becoming a non-tariff barrier to trade. One thing essential to support the emergence of an efficient and fair international trading framework is a public interoperable embedded emissions accounting scheme. Research collaboration would be a good place to start to ensure these schemes embody efficiency and transparency from a wide range of perspectives.

2.2.2 Presentation by Ms. Kristen Bondietti (article three)
"Promoting trade in environmental goods and technologies- approaches in recent trade agreements"

Ms. Bondietti addressed three main topics in her presentation, namely broad issues involving regulations of environmental goods and technologies, how trade agreements are evolving to promote environmental goods and technologies, and some developments looking forward that could help inform approaches in APEC.

On the first topic, emerging environmental goods and technologies (EGTs) largely involves new industries, such as hydrogen, for which regulations are not fully developed. They are also not only final products, but critical inputs into value

chains. Therefore, regulation along the supply chain impacts on trade. In addition, there are linkages between EGTs and services, investment and intellectual property. Finally, standards are also important. Non-tariff measures that impact on trade are therefore numerous and consequently very difficult to identify. Addressing them demands a holistic approach.

On the second topic, some specific provisions in trade agreements deal specifically with EGs, aside from tariff commitments. For instance, the EU-Vietnam FTA includes a specific chapter focused on non-tariff barriers, which affect trade and investment related to the generation of energy from renewable and sustainable sources. Consultation mechanisms are established in agreements such as CPTPP and USMCA to address potential barriers to trade in EGs identified by the parties. In addition, many agreements include cooperation mechanisms, where parties commit to work together also in international fora to build regulatory cooperation on environmental challenges.

Some new trade agreements create frameworks of regulations of trade that is broader than binding rules among the parties. One example is DEPA (digital economic partnership agreement) among APEC economies. It covers a broad range topics and modules, relevant to digital trade, not to EGs. Together, they frame a broad framework that covers a wide range of economic activity. It consists mostly of facilitative provisions rather than binding rules, and the focus is on developing non-prescriptive principles to guide policy and regulatory frameworks of trade. Although this agreement is not directly related to EGs, it is illustrative of an alternative approach to trade regulation.

On the third topic, elements in trade agreements could help inform future approaches to promote EGs in APEC. One possibility is to borrow FTA elements. Sector and issue-specific approaches provide some scope for tailored outcomes that can address particular measures and areas. They can combine rule-making and cooperation mechanisms, supporting closer regulatory alignment and help promote consistency among economies. They can help improve transparency and predictability in regulatory compliance. The EU-Vietnam FTA provisions show that it is possible to have a cross-cutting reach and across the different types of NTM involved. Strengthened provisions on NTMs can also help ensuring measures are not overly restrictive and also help improve transparency across horizontal regulations.

The EPA approach, such as the DEPA, provide scope to link disciplines on goods, the regulation of services, investment and intellectual property, more so than the traditional FTA approach. This supports the whole of value chain in a more holistic approach to trade, addressing NTMs and potentially EGT and

services. It could serve to build convergence on common principles, rules on practices in a complex and emerging regulatory area. It allows for flexibility in diverging regulatory approaches, and it has the advantage of being built on open plurilateralism.

A final element is what APEC does well, cooperation and cooperation mechanisms. This will be a key element alongside rules and practices. Cooperation is highly desirable to support activity in any particular area, involving capacity building, information exchange and dialogue, for example on standards recognition, technology adoption and regulatory reform.

2.2.3 Presentation by Mr. Tim Karlsson (Executive director, IPHE secretariat) "Perspective and actions underway in the international partnership for hydrogen and fuel cells in the economy"

Mr. Karlsson noted that the IPHE started in 2003, and is an information-sharing initiative related to hydrogen specifically. There are numerous domestic and regional hydrogen strategies that have been published over the past couple of years. The key issue is the provision of clean hydrogen. Significant trade corridors are being developed, in Asia between the Middle East, North Africa, and Europe, and between Europe and the Americas.

Climate change is a key driver, as well as local air quality, energy security and diversity of supplies, and resilience and stability in the new energy systems. New jobs, supply chain opportunities, impact on transportation industry and energy storage are issues of interest.

On international trade, there is a key issue of tracing the environmental impact of the different supplies of hydrogen, in particular the GHG intensity of the hydrogen. There are accounting standards applicable to different methods of production. The hydrogen production analysis taskforce of IPHE (which is not a standards body), is looking to develop a mutually agreed methodology to determine the GHG associated with the production of a unit of hydrogen. This will help facilitate the market evaluation in international trade. IPHE is working on a guidance document to address questions on the definitions of "clean hydrogen" and develop a methodology to conduct accounting. It would then go forward to a standards body such as the ISO to develop a standard that multiple economies would implement as part of their international trading scheme. This is the first step in trying to come to a consensus around the approach to determining GHG emissions associated with hydrogen production from various sources, with the goal of seeking public input at the Hydrogen Energy Ministerial in October.

IPHE also has a hydrogen trade rules task force to understand what the playing field looks like today for the trade of hydrogen and hydrogen carrier. Ammonia can be a hydrogen carrier, as can organic compounds. Questions to be answered include w the tariff rates, technical requirements, safety or security of different carriers. The goal is to see if the expected scale up of the production and trade of hydrogen could lead to barriers or issues. There are also working groups on regulation, codes, standards and safety and on education and outreach.

In summary, innovation is key for the hydrogen sector. To facilitate this, market framework issues (market transparency and regulatory certainty) are critical elements on which IPHE is taking action. There is also a significant need for infrastructure investments to help the sector achieve its potential.

2.2.4 Presentation by Mr. Ryo Chishiro (Kawasaki Heavy Industries)
"Way to de-carbonization – Kawasaki Hydrogen Road -"

Mr. Chishiro introduces Kawsaki Heavy Industries' activities for the hydrogen supply chain.

Kawasaki aims to contribute to achieving de-carbonization as the only company in the world to own the whole supply chain technology for production, transportation, storage and utilization of hydrogen. Liquefied hydrogen, which Kawasaki is promoting, enables large volume, long-distance, long-term transportation and storage of energy and connects multiple sectors. Also, an extremely wide range of industries are involved in hydrogen supply chain and demand field, which create a virtuous cycle for the environment and economy.

On hydrogen trading rules, the situation between Europe and East Asia is very different. Europe generally has low population density and therefore low energy consumption density. There are a number of regions rich in renewable energy which are distributed internationally by power grids in Europe. There is already a vast network of natural gas pipeline and some of them can be used for hydrogen distribution. Thus, in Europe, hydrogen and renewable energy could be distributed using existing power grids and pipelines.

On the other hand, Japan, Korea and Chinese Taipei have high population and energy consumption densities and energy self-sufficiency rate is low. LNG or oil can be transported by carrier ships, so it is not so important to connect among areas by pipelines. Especially in Japan, there are strict regulations and pipeline systems are not widespread. Therefore, pipelines cannot be expected to play a major role for hydrogen distribution. Perhaps, the world's first pure hydrogen supply chain may begin between Australia and Japan. Japan may also import hydrogen as ammonia from the Middle East. Europe and US also plan to import

shortages from overseas.

Hydrogen will be traded internationally in the near future, but accounting rules concerning GHG emissions need to be established. The structure of traditional energy supply chain consists of mining, production, transportation and utilization. In the case of the supply chain between Australia and Japan, mining to loading the carrier ship is operated in Australia and then transported overseas, while unloading and utilization are operated in japan. In this case, the process area and emission responsibilities completely match. However, in the case of hydrogen, CO2 is emitted in production and not in consumption. This raises the question of whose responsibility is this CO2 emissions for hydrogen production. In the LNG situation, the principle that emission responsibility lies with the end consumers is satisfied because carbon, a part of methane, is transferred to consumer economies with energy. But in the hydrogen supply chain, there is a different situation. Universal rules are needed as to whether these emissions are Australian or Japanese. In addition, overseas transportation is not the responsibility of any economy and it is to be considered by the IMO. When we consider the environmental property of hydrogen, we need to do so for the total emissions in the supply chain. Scopes 1 and 2 may be suitable for Europe, but Japan needs to consider Scope 3, including overseas transportation. We need rules which can be useful for economies.

In conclusion, there are no overseas trading rules of GHG responsibility for hydrogen production and transportation, so we need to establish such rules as commercial hydrogen supply chains start to emerge. The scope of hydrogen environmental property requirements can change depending on the economy or region. So flexible trade rules of hydrogen property that allows for selection of options of the scope of GHG to account for are desirable. Maritime GHG has a great impact on emission footprint of clean energy. It is important to take the whole supply chain into account when considering the environmental footprint.

2.2.5 Question and Answer Session

A question was posed to Ms. Bondietti on what she referred to as the EPA approach, and how she would see this working with regard to environmental regulations. Ms. Bondietti replied that the advantage of the EPA approach is that it gives a broader scope to break down some of the issues and regulatory questions which might be considered in the cross-over between trade rules. It gives more scope than FTAs to address regulatory issues more holistically, not necessarily in a binding manner. Looking at the DEPA example, it is set out in a series of modules that address a different area of digital trade and have differing provisions or

mechanisms within those modules that suit the particular area of regulation. Some are more developed than others, where there are existing rules, and others where the technology or the regulation is very new, for example AI, the provisions or the disciplines economies have agreed to are much less binding and are more focused on cooperation mechanisms. So there is a sense of flexible approaches within a broader framework to deal with specific issues. As could be seen from this session, there are a lot of unresolved issues across a lot of areas.

In terms of where to start, the first question would be to identify the goods and technologies to be covered. The second would be what the barriers, rules or measures that are to be addressed. As the third step, there would be the need to consider what the approaches that may best address these are. At the moment, there is still a lot of uncertainty as to what could be the focus or what do we want to improve or continue.

Another question was posed to Mr. Karlsson on the timeframe for establishing international standards on trade in hydrogen and for economies to adopt them. Mr. Karlsson replied that the IPHE aimed to produce and official document by the beginning of October. Then, standards setting bodies such as the ISO would take up the guidance documents and define standards based on agreements from participating members. This process would take two to three years, so the objective would be to start consideration in the ISO by the end of this year.

A third question was raised regarding how to bring these issues to the WTO. Ms. Bondietti replied that in terms of addressing broad regulatory issues, if APEC could agree on some approach, not only would that have value in itself, it would also be possible to bring that into the WTO. Dr. Aisbett added that in addition to APEC and other bodies, development through unofficial, academic channels could also be considered. It would be important to avoid economies committing to something without really understanding what they are committing to. Thus, it would be important to enhance transparency through cooperation among other unofficial gatherings.

2.3 Discussion and Next Steps

2.3.1 Discussion among APEC economies

Mr. Sashida thanked the speakers for their presentations, and noted that Japan had raised some examples of measures that could facilitate the trade of environmental goods and technologies. He welcomed feedback from APEC economies, as well as any ideas on which areas to focus on for further discussion.

New Zealand noted its thanks for the presentations and the synergies between this discussion and the issue of environmental sustainability, which is one of the themes of this years' APEC. New Zealand also noted its participation in the open plurilateral Agreement on Climate Change, Trade and Sustainability (ACCTS), and that this agreement had many elements that overlapped with the points discussed today. It was also mentioned that there would be synergies with the trade and environment negotiations in the WTO.

Australia also thanked this introductory discussion on the regulatory aspects of environmental goods and services, and noted that it intended to hold a workshop on trade and environment in order to tackle climate change.

Mr. Sashida thanked the interventions and invited economies to raise any further questions or proposals via email as necessary. In conclusion, he noted the interesting proposal to begin work by discussing non-binding rules and definitions rather than launching directly into discussions on a future framework. He expressed the hope that APEC could continue to serve as an incubator for ideas on this topic, including in emerging areas such as hydrogen.

2.3.2 Next Steps

Through the policy discussions, it has become clear that there are a very wide range of measures that could be discussed under this topic. There are several different options to take action, including through adopting existing rules and agreements between individual APEC economies more widely, as well as through more flexible approaches and cooperation mechanisms. Therefore, a logical next step could be to further map out issues that APEC economies wish to address and highlight priority areas for further discussion. Following this, economies could consider what approach or approaches would be best suited to adopt mutually beneficial policies toward the goal of contributing to global carbon neutrality. From this perspective, further non-binding study and discussion within APEC in 2022 and beyond is needed, keeping in mind the role of APEC as an incubator of ideas that could be taken forward in other fora, including the WTO.

Annex: POLICY DISCUSSION AGENDA

5minutes **Welcome and introduction**

Japan to welcome participating economies and introduce the topics to be taken up at the meeting,

10 minutes **Session 1: Presentation from Japan on approaches to promote trade and development in environmental products and technologies**

Speaker:

- *Mari Shimizu, Director of Legal Affairs, International Legal Affairs Office/WTO Compliance and Dispute Settlement Office, Multilateral Trade System Department*
  Ministry of Economy, Trade and Industry, Japan

60 minutes **Session 2: Presentations from stakeholders/experts on potential issues for environmental goods to be developed and traded globally**

Speakers:

- *Dr .Emma Aisbett, Associate Director, Research, Zero-Carbon Energy for the Asia-*
  Pacific Grand Challenge & Fellow, School of Regulation and Global Governance, Australian National University
- *Kristen Bondietti, Director – Trade Agreements, Article Three; and Senior Trade Adviser - Australian APEC Study Centre, RMIT University*
- *Tim Karlsson, Executive Director, International Partnership for Hydrogen and Fuel*
  Cells in the Economy (IPHE) Secretariat
- *Speaker TBD, Kawasaki Heavy Industries*

➢ Speakers could, for example, keep in mind the following questions when giving their presentations.

・ What improvements in the regulatory environment would be beneficial to encouraging research and development, production, distribution, and dissemination of environmental goods in the context of global trade?

- Are there existing policies and agreements that stakeholders believe could serve as best practices for facilitating trade in environmental goods?
- What could be done in terms of international coordination among different economies to reduce regulatory barriers and build resilient supply chains of environmental goods, their parts and raw materials?
- Are there areas in which partnerships between developed and developing economies would be particularly helpful?

20 minutes **Q&A session**

5 minutes **Break**

45 minutes **Session 3: Discussion among APEC economies on the impact of non-tariff measures on trade in environmental goods**

- Taking into account input from stakeholders, APEC economies will be invited to share their initial views on what they regard as non-tariff obstacles or issues to development and trade of environmental goods, as well as possible ways to overcome them, including both existing trade disciplines and possible new ideas.

5 minutes **Summary and closing remarks**

Japan to provide a summary of the discussion and outline next steps for the policy discussion.