



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Study Report on Environmental Provisions in APEC Member Economies' FTAs/RTAs

APEC Committee on Trade and Investment

November 2017

APEC Project: CTI 27 2016A

Produced by

Ms Li Liping, Division Director, Institute for International Environmental Policy, Policy Research Center for Environment and Economy, Ministry of Ecology and Environment, China

E-mail: li.liping@prcee.org

Dr Zhang Bin, Senior Engineer, Policy Research Center for Environment and Economy, Ministry of Ecology and Environment, China

E-mail: zhang.bin@prcee.org

Ms Zhao Jia, Policy Research Center for Environment and Economy, Ministry of Ecology and Environment, China

E-mail: zhao.jia@prcee.org

Ms Zhang Li, Policy Research Center for Environment and Economy, Ministry of Ecology and Environment, China

E-mail: zhang.li@prcee.org

Policy Research Center for Environment and Economy,
Ministry of Ecology and Environment, China
1 Yuhuananlu, Chaoyang District, Beijing, China, 100029
Tel: 86 10 84665316

For

Asia-Pacific Economic Cooperation Secretariat

35 Heng Mui Keng Terrace

Singapore 119616

Tel: (65) 68919 600

Fax: (65) 68919 690

Email: info@appec.org

Website: www.appec.org

© 2018 APEC Secretariat

APEC#218-CT-01.2

Disclaimer:

The information used in the report was selected from public information from respective APEC economies. The opinions and conclusions were from the *Seminar on Environmental Provisions in FTAs/RTAs* organized by Policy Research Center for Environment and Economy, Ministry of Environmental Protection, China, and the authors of this report. The analysis in this report does not necessarily represent the views of APEC member economies.

List of Acronyms

APEC	Asia-Pacific Economic Cooperation
EA	Environmental Assessment
EGS	Environmental Goods and Services
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ERs	Environmental Reviews
FTA	Free Trade Agreement
FTAAP	Free Trade Area of the Asia Pacific
GATS	General Agreement on Trade and Service
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
IGES	Institute for Global Environmental Strategies
MEA	Multilateral Environmental Agreement
NAFTA	North American Free Trade Agreement
NIA	National Impact Assessment
NSESD	National Strategy for Ecologically Sustainable Development
OCT	Overseas Countries and Territories
OECD	Organization for Economic Cooperation and Development
OITA	Office of International and Tribal Affairs
RCEP	Regional Comprehensive Economic Partnership
RTA	Regional Trade agreement
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SIA	Sustainability Impact Assessment
TEPAC	Trade and Environment Policy Advisory Committee
TPSC	Trade Policy Staff Committee
USTR	United States Trade Representative
WTO	World Trade Organization

Table of Contents

List of Acronyms.....	III
1. Introduction.....	1
1.1 Background.....	1
1.2 Scope and Methodology.....	3
1.3 Structure	4
2. Development of Environmental Provisions in FTAs/RTAs.....	6
2.1 Overall situation	6
2.2 The development of environmental provisions in FTAs	7
2.3 Analysis of Rationale for the Establishment of Environmental Provisions in FTAs/RTAs.....	11
3. Content Analysis of Environmental Provisions	18
3.1 Main Environmental Provisions in FTAs/RTAs	18
3.2 Environmental Cooperation Provisions in FTAs/RTAs	28
3.3 Environmental Impact Assessment of FTAs/RTAs.....	34
4. Environmental Provisions in FTAs/RTAs in APEC	44
4.1 Relevant Policies in APEC.....	44
4.2 Development of Environmental Provisions in APEC Members' FTAs/RTAs..	46
4.3 Typical Environmental Provisions in APEC Members' FTAs/RTAs	51
4.4 APEC member economies comments	54
5. Case study on the Environmental Provisions in APEC Members' FTAs/RTAs.....	57
5.1 United States.....	Error! Bookmark not defined.
5.2 Canada	57
5.3 Republic of Korea	59
5.4 New Zealand	60
5.5 Japan	70
6. Recommendations	74
References	75

1. Introduction

The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum established in 1989 to leverage the growing interdependence of the Asia-Pacific. APEC's 21 members aim to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration.

1.1 Background

Since the 90s of the twentieth century, both Multilateral Environmental Agreements (MEAs) and trade organizations have started to stress the linkage of trade and environment at least in the multilateral forums, along with the introduction of sustainable development. Nevertheless, the progress of discussions and actions taken on trade and environment was somehow limited in the multilateral forums, as the WTO negotiations progressed slowly and the global environment continues to deteriorate. In contrast with the slow progress in WTO negotiations, Free Trade Agreements (FTAs) began to flourish. There are 239 FTAs notified to the WTO Secretariat that were in force by the end of 2016. Apart from Mongolia, all WTO Members have participated in at least one FTA.

The environmental provisions in international free trade agreements can be dated back to 1971. The agreement signed by EU and the Overseas Countries and Territories (OCT) states that “the development of international trade should be managed sustainably in accordance with relevant protocols. OCT’s special needs and respective development levels need to be taken into account in planning and implementing the measures related to the environment”. Yet the earliest provisions on trade and environment with substantial contents can be found in the North American Free Trade Agreement (NAFTA) signed by the US, Canada and Mexico, which entered into force in 1994. According to available statistics, there are 180 FTAs that cover the issue of environment,

accounting for 85% of 212 FTAs in force, 36 of which have an independent environment chapter. In the spectrum of time, the environmental provisions on trade and environment have increased significantly since 2002, especially in 2004, 2011 and 2012, when there were a number of FTAs including an independent environment chapter.

As the largest cooperation organization in Asia-Pacific area, APEC has promoted regional trade and sustainable development. It has set its objective as “... developing more effectively the human and natural resources of the Asia-Pacific region so as to attain sustainable growth and equitable development of APEC economies...” since the beginning of the establishment of APEC ^[1]. In order to achieve this objective, members have strengthened their cooperation in working for the economic and environmental wellbeing of the entire Asia-Pacific region.

Regarding FTAs/RTAs as an important engine to promote regional economic and environmental wellbeing, APEC leaders in 2015 emphasized the importance of FTAs/RTAs, and requested releasing the *APEC Trade Facilitation Model Measures for RTAs/FTAs*, which include environmental model measures. In 2014, APEC released *"The Beijing Roadmap for APEC's Contribution to the Realization of the FTAAP"* and request members address “next generation” trade and investment issues in order to make FTAAP to be comprehensive and high quality. However, the widening gap of understanding and practices among the APEC member economies in terms of FTA/RTA negotiation on environmental provisions may become one of the biggest challenges to the realization of FTAAP.

Therefore, study on specific topics, such as the status quo and trend of environmental provisions in FTAs/RTAs, will be useful for narrowing the gap.

[1] APEC Leaders' declaration, 1994. https://www.apec.org/Meeting-Papers/Leaders-Declarations/1994/1994_aelm

1.2 Scope and Methodology

The subject of this study is the environmental provisions in the FTAs/RTAs body text and terms related to environment in annex. The key is the substance of the provisions rather than literal analysis. For example, terms of “sustainable development” and “protecting human health” are also regarded as environmental provisions, while “investment environment” or “business environment” is not. The sample for this study is the 212 FTAs/RTAs which were notified to the WTO by the end of 2016, with a focus on 36 of them which contain environmental chapters (A number of economies have not provided English version of their signed FTAs, thus to be excluded from the sample due to language restrictions).

The research methods applied in this study include literature review, questionnaire survey, workshop, interview, etc.

Literature review: Relevant study and literature was referred to get further understanding on the environmental provisions in the FTAs/RTAs. These literatures include: *Annual Report on Environment and FTAs* published by OECD, *Green Trade Agreements* written by Dale Colyer, *Environmental Impact of a Free Trade Agreement between China and Norway* assessed by Ole Kristian Fauchald and Haakon Vennemo, etc. Also, WTO RTA database is an important tool used and referred in this study.

Questionnaire surveys: The survey on APEC members’ needs and awareness of environmental provisions are conducted through Questionnaire Investigation. A Questionnaire on Environmental Provisions in FTAs/RTAs in APEC Economies was developed and sent out to 21 APEC members on June 29. 7 economies responded so far. Initial analysis of the questionnaire was conducted to investigate APEC members’ needs and awareness of environmental provisions.

Workshop: On 12 September 2017, a workshop on Environmental Provisions in

FTAs/RTAs was held and attracted much attention. Around 30 participants from member economies, international organizations, research institutes and academia attended this seminar. Overall Situation of Environmental Provisions in FTAs/RTAs; Rule Issues of Environmental Provisions in FTAs/RTAs; and Assessing Environmental Impact of Trade or Trade Agreement were discussed on the workshop.

Interviews: Interviews with experts who were directly involved in the FTA negotiations were conducted to get first-hand experience and comments. These experts include experts in the field of environmental and trade law, environmental impact assessment, as well as environmental related trade arbitration.

Besides, brainstorming, comparative analysis and mathematical analysis were used in this study.

1.3 Structure

There are six chapters in this book. Chapter 1 introduces the background, study scope and methodology. Chapter 2 shows the development of environmental provisions in FTAs/RTAs. Chapter 3 analyses in depth the contents of environmental provisions. Chapter 4 focused on the environmental provisions or environmental chapters in FTAs/RTAs signed by APEC member economies. Case studies on the Environmental Provisions in APEC Members' FTAs/RTAs were done in Chapter 5, including: USA; Canada; Republic of Korea; New Zealand and Japan. Recommendations were made in Chapter 6.

The structure of the study report is as follows:

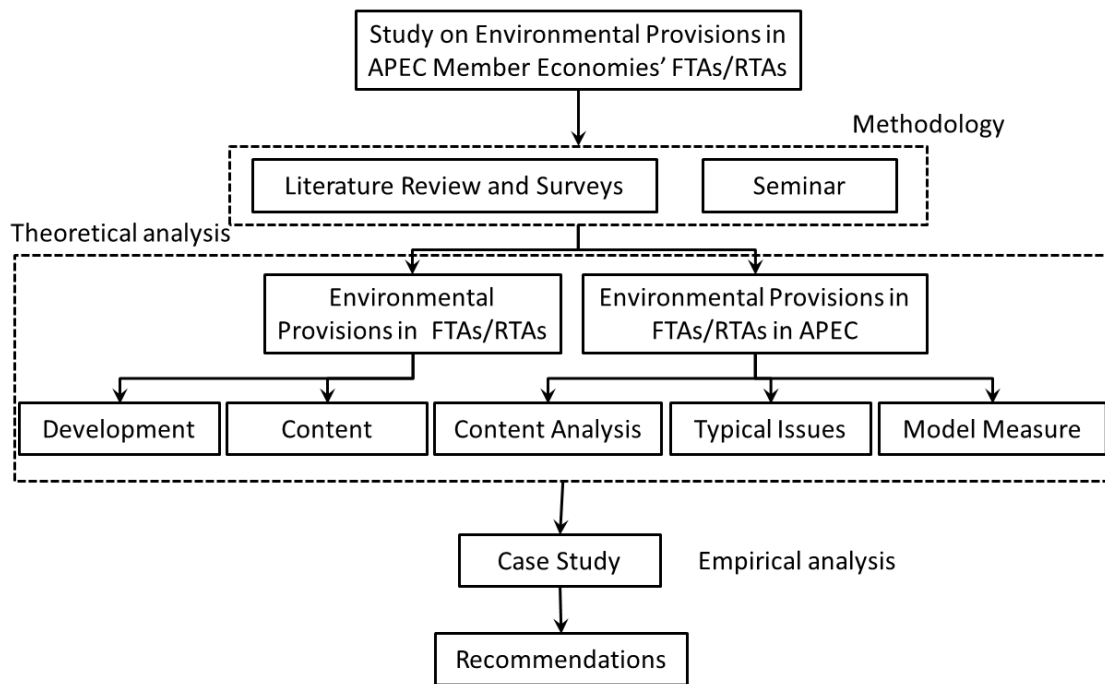


Figure 1.1 Study roadmap

2. Development of Environmental Provisions in FTAs/RTAs

Since the establishment of the World Trade Organization (WTO), a diversity of Free Trade Agreements (FTAs) / Regional Trade Agreements (RTAs) have been negotiated around the world.

2.1 Overall situation

The FTAs proliferated in the late 1990s. According to the statistics, there were altogether 239 FTAs that had been reported to the WTO and had come into force by the end of 2016, of which over 85% contain environmental provisions. Environmental provisions in FTAs refer to articles and contents including environmental protection or sustainable development in the text or appendix and affiliated agreement of FTAs.

The existence and rapid development of FTAs is ascribed to both historical and pragmatic factors: firstly, the FTAs have already existed before the General Agreement on Tariffs and Trade (GATT); secondly, FTAs have been acknowledged in the legal provisions of GATT and WTO on the international law basis, for example, according to the Article 24 of GATT in 1947 and its explanations, a free trade area can exist under certain conditions ^[2]; thirdly, due to the global financial crisis in 2008, economies accelerated the pace of negotiating FTAs to keep expanding their exports and international markets.

From the global perspective, FTAs include the following characteristics. Firstly, the FTAs have developed rapidly. Since WTO was established, more than 20 FTAs came into effect every year. Secondly, with the increase in number, global FTAs also show a trend of networking^[3]. Some economies have established FTAs with various economies, forming a structure similar to the “*Axle-and-Spoke*” of the wheel; the axle economies

[2] Main conditions include: trade barriers do not increase after the integration; agree to eliminate "virtually all" tariffs and other trade restrictions on the exchange of goods in the area over a "reasonable" period; the above measures will report to GATT and GATT will decide to establish a working group to determine if the above conditions were met.

[3] Yang Jing, Study on the IPR provisions of FTAs, Law Press, 2013: 8.

in the system not only form a self-centered FTA network, but also become the key nodes in the global FTAs. Thirdly, in terms of composition, FTAs which were signed or are currently being negotiated are mainly bilateral agreements, accounting for about 80%. The number of multilateral FTAs is significantly less. Fourthly, in terms of content, the scope of traditional FTAs is focused on trade in goods; rules involved are limited to the concession of tariff and non-tariff barriers, etc. With the development of economic globalization, the scope of liberalization expanded accordingly. The content of FTAs expanded greatly in scope, including service trade, investment liberalization, trade dispute settlement, intellectual property, competition, environment and labor standards, etc. Fifthly, in terms of the balance between regional FTAs and cross-regional FTA, cross-regional FTAs are greater in number.

2.2 The development of environmental provisions in FTAs

The environmental provisions in FTAs have gone through the following phases: first phase is the understanding of interaction and mutual influence of environment and trade, then environmental interests resulted in the inclusion of environmental provisions in FTAs; this was followed by the establishment of trade and environment committees and the negotiations on trade and environment issues in WTO. After that, FTAs gradually started to include environmental provisions or chapters on a significant scale.

In line with development trend of FTAs, environmental provisions within FTAs have been developing quickly in recent years. By the end of 2016, except for non-English and inaccessible FTAs, among 212 FTAs, 180 contain environmental provisions, accounting for over 85%. Among the FTAs which contain environmental provisions, there are 36 with independent environmental chapters^[4].

The number of FTAs that contain environmental provisions has increased greatly in recent years. The environmental provisions in the FTAs signed prior to 1992 are mainly

[4] Environmental chapters here include sustainable development chapters, such as those in EU's FTAs.

exceptional provisions. In 1992, the United States, Canada and Mexico signed the NAFTA which included the North America Agreement on Environmental Cooperation (NAAEC) as a side agreement. After the year 2000, and especially in more recent years, FTAs containing environmental provisions increased significantly, but these provisions still appeared primarily in the preamble or quoted Article XX of GATT and Article XIV of GATS and environmental cooperation mechanisms. FTAs signed in 2011 and 2012 included more environmental chapters. In 2010, 30% of FTAs contained environmental provisions. By the year of 2011, more than 50% of FTAs contained environmental provisions. 70% of FTAs contain environmental provisions by 2012.

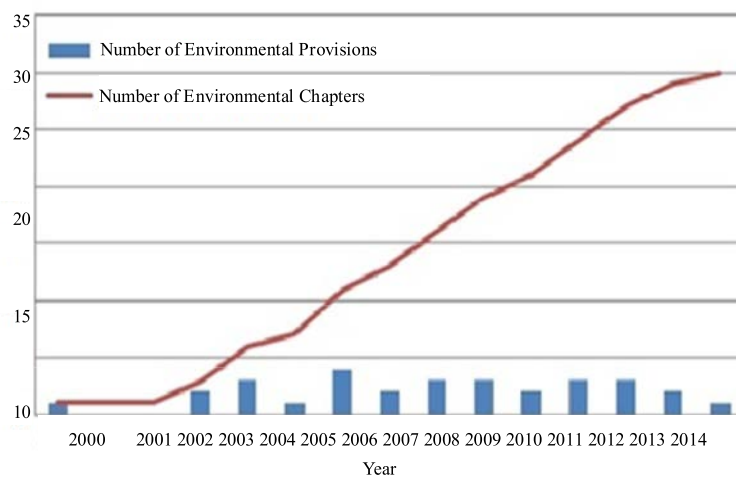


Figure 2.1 Statistics of Environmental Chapters in FTAs (2000-2014)

From the perspective of region, FTAs signed between developed and developing economies mainly include environmental provisions, however, the environmental provisions in the agreements signed between developing economies are still relatively low. The US, European Union, Canada, and New Zealand are the promoters of the integration of environment and sustainable development provisions into FTAs, with most their signed FTAs including environmental or sustainable development provisions or independent chapters. FTAs signed between developing economies contain fewer environmental provisions, especially the independent environmental chapters. However, Chile is an exception, which included environmental provisions in most of its FTAs.

Most of them were environmental chapters. Some trade agreements among developing economies initially did not include important environmental provisions, and later added a protocol to deal with environmental issues. For example, a typical case is the Southern Common Market (Argentina; Brazil; Paraguay and Uruguay) signed in 1991 and environmental agreement framework signed in 2001. Recently, more and more FTAs signed by developing economies also include environmental chapters, such as Republic of Korea and China. From the number of provisions contained in the trade agreement, the EU-Peru-Colombia FTAs has up to 20 articles, followed by Canada - Republic of Korea, 19 articles. In general, agreements containing environmental provisions are mostly signed by the US, European Union and Canada (see Figure 2.2).

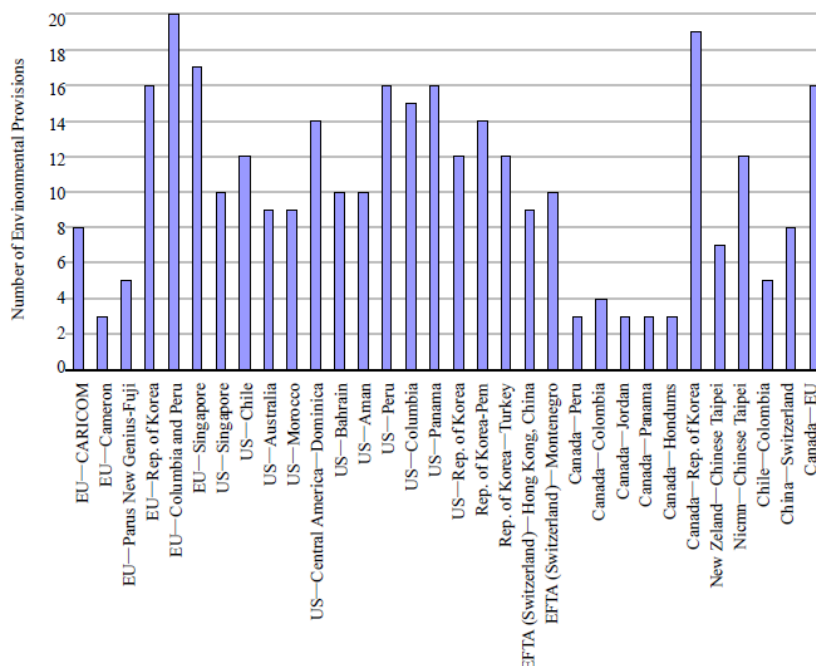


Figure 2.2 Numbers of Environmental Provisions in FTAs

From the perspective of form, environmental provisions are mainly contained in the body of FTAs, such as the FTAs article ^[5], chapter ^[6], annex ^[7], affiliated agreement

[5] Refers to articles in the body of FTAs, outlining general principles in terms of rights and obligations of each party.

[6] Refers to the main part of FTAs. Divided by specific groups of issues, the chapter typically includes goals and principles, trade in goods, dispute settlement chapter, etc. The contents of chapters are made up of several articles.

[7] FTAs are made up of several annexes except chapters, which generally include “tariff reduction table”, “certificate

(also translated as side agreement) ^[8] and memorandum of understanding (MOU) ^[9]. The environmental provisions of FTAs exist in many forms. Environmental provisions in the main text, for example, the preamble, SPS, General exception (exceptional environmental provisions of general trade obligations), technology cooperation, service, investment and government procurement; commitments to effectively implement environmental law, environment standards, procedure guarantees and the public submissions procedure to ensure the implementation of domestic environmental law; mediation commitment or dispute settlement mechanism on environment obligations, environment cooperation and capacity building mechanism and multilateral or regional environment agreements; public participation commitment; as an independent environment chapter of the body agreement; environment subsidiary agreement; or a mixture of several of the above forms. The EU-Chile, Japan-Mexico, Republic of Korea-Chile, Mexico-Chile and Canada-Chile FTAs emphasize sustainable development or the integration of economic, trade and environment in their preamble text. However, US-Chile, US-Australia, US-Singapore FTAs stress environment issues in the preamble. Environment chapters are highly respected by Europe; Canada; the US; etc., and environmental content appears in the form of chapters in the body of FTAs.

From the perspective of content, as there is no single object or structure of FTAs, the purpose, nature and scope of environmental provisions in FTAs are various, as is depth and breadth of environmental content. For example, the situation varies from conceptual statements of one or two environmental provisions to independent environmental chapters containing environmental standards, dispute settlement and

of origin” and “service commitment table” and general provisions of personnel and mechanism. For example, the annex of China-Costa Rica FTA includes the free trade Committee and coordinator, the annex of United States-Korea FTA includes supplementary agreements, minutes of negotiations and related documents of FTAs.

[8] Refers to parallel agreements of other specialized areas signed at the same time with the FTAs, the same legal effect with the body of FTAs. They usually appear in the annex of FTAs, also known as “package agreement”.

[9] After both sides reach consensus through consultation and negotiation, understanding refers to document recorded in writing and designed to indicate parties should understand each other and properly handle their differences and controversies. In the Memorandum of Understanding, in addition to confidentiality, termination, governing law, cost-sharing, exclusive negotiations and dispute resolution provisions, the remaining provisions are not legally binding to the parties. Before signing of the agreement, the memorandum of understanding does not have any legal obligation on both sides.

institutional settings. The whole trend is that environmental content of FTAs is becoming more and more detailed and legally binding.

2.3 Analysis of Rationale for the Establishment of Environmental Provisions in FTAs/RTAs

In the negotiations of FTAs, some negotiators actively promote or lead the establishment of environmental provisions, while some negotiators refuse. Some of the reasons ^[10] are included as below.

(1) Reasons for promoting environmental provisions

Including environmental provisions in FTAs arises from history, law, institutions, mechanisms, verification and more. There are legal requirements, institutional goals and duty arrangements, and domestic reasons including meeting community demands and other political goals, international competitive strength and environmental constraint.

Direct reasons for including Environmental Provisions in FTAs

The apparent reasons to promote environmental provisions include legal requirements, institutional goal and duty arrangements.

Firstly, due to specific parliamentary authorization or legal requirements, the US, EU, New Zealand, Canada, etc. positively promote the establishment of environmental provisions in FTAs. Take the US as an example, Paragraph 2102 of the Bipartisan Trade Promotion Authority (TPA) Act of 2002 approved by the Congress in 2002 states that *“to ensure that trade and environmental policies are mutually supportive and to seek to protect and preserve the environment and enhance the international means of doing*

[10] These views are derived from the negotiators interviewed by the authors or the representatives participating in the workshop held in Beijing in September 2017.

so, while optimizing the use of the world's resources”, and specific environmental objectives are set as principal negotiation objectives. This provides a basis for the US to establish environmental chapters in future negotiations on FTAs. Therefore, during 2004 to 2007, the FTA of US-Australia (2004), US-Chile (2004), US-Singapore (2004), US-Bahrain (2006), US-Morocco (2006), US-Oman (2006) and CAFTAs (2005), the environmental chapter has formally become a part of FTAs and has been reinforced, stipulating environmental protection levels, enhanced environmental laws, procedural arrangements, environmental consultations, public participation and environmental cooperation, etc. When the authorization of the TPA ended in 2007, the objectives of trade negotiations stipulated in the TPA were updated to those stipulated in the 2007 Bipartisan Trade Deal, reinforcing the objectives of environmental chapters.

In 2001, Framework for Integrating Environment Standards and Trade Agreements ^[11] was issued by New Zealand, stipulating the principal of incorporation of trade and environmental policies. The EU has incorporated contents of environment and FTAs into its sustainable development strategy. Details are outlined in Column 2.1 “*Environmental articles of Bipartisan Trade Deal*” and Column 2.2 “*Authorizing on environment and FTAs in main economies*”.

Column 2.1 Authorization on the Environment and FTAs

US: environmental regulations in trade act. The trade act sets up the trade negotiation goals and states that “...*ensure the mutual supports between trade and environmental policies, seek measures to environmental protection and international cooperation, and optimize the usage of global resources...*”, and specific environmental objectives are set as principal negotiation objectives, and include ensuring American trade partners effectively enforce their environmental laws, improve their environmental

¹¹ Source: <http://www.mfe.govt.nz/more/international-environmental-agreements/free-trade-and-environmental-cooperation-agreements-0>

standards, enhancing the capacity of environmental protection of trade partners through promoting sustainable development, seeking market access for environmental technologies, goods and services.

New Zealand: the integration of environmental standards and trade agreements. New Zealand parliament authorized directive to instruct the government to integrate trade policies and environmental policies in all international trade negotiations. *2001 Framework for Integrating Environment Standards and Trade Agreements* was issued to guide New Zealand's trade and environment negotiations, to ensure sustainable development is fully considered in all international negotiations, at the same time it also provided the important principles of environment and trade policies. These principles include: to promote the consistency between multilateral environmental agreements and trade agreements, to promote cooperation between related departments; to ensure government the ability to set rules for environmental protection; to recognize that trade measures are needed sometimes to improve international environmental objectives. The framework's main objective is to coordinate in trade and environmental policy objectives of New Zealand, and at the same time to recognize that environmental standards should not be misused for protectionist reasons.

EU: incorporate environment and FTAs content into its sustainable development strategy. The sustainable development strategy of EU was issued in 2001 and revised in 2006, including seven key challenges. One of which is actively promoting worldwide sustainable development to ensure that the EU's internal and external policies are in line with global sustainable development and international commitments. To achieve this goal, the strategy states "*further efforts by the EU and its member states will be taken to achieve global sustainable development through international trade and investment which will play as a tool. At this point, the EU should work together with its trade partners to improve environmental and social*

standards, and should make full use of regional or bilateral trade agreements or cooperation agreements”.

Source: <http://ustr.gov/>. <http://www.mfat.govt.nz/>. <http://ee.europa.eu/>

Secondly, New Zealand, EU, etc. pay great attention to trade and environment institutional arrangements, and stipulate related duties.

Indirect reasons for including Environmental Provisions in FTAs

Firstly, it is to pursue sustainable development and environmental protection. Many workshop participants viewed this as the most important factor. For example, increased trade can increase economic efficiency and output, leading to consequent impacts. Economic development usually leads to higher consumption of nonrenewable resources and damage to environment such as air pollution and deterioration of water quality; therefore the environmental provisions of FTAs are to ensure the objectives of sustainable development and environmental protection.

Secondly, it is to meet community demands and to meet other domestic political goals. Public and NGOs in the US strongly appeal for disapproval on FTAs without any environmental considerations, so to get approval, the US must include an environmental chapter in FTAs to satisfy domestic demand to avoid negative impacts to environment.

Thirdly, it is to address concerns of possible unfair competition advantage caused by weak environmental measures, and to stimulate the economy and increase exports. The US and EU are actively promoting trade liberalization of environmental goods and services in FTAs in order to expand their exports. Environmental goods and services will be a new point of economic growth and competitive strength and the developed economies have absolute advantage in this area. According to related data, the output

value of environmental industry in the US in 2010 accounted for 40% of the global output value of this industry, and its export volume in 2009 was 40.5 billion USD which accounted for 31% of the global trade volume in environmental industries, making US with the biggest trade surplus in environmental goods and services. The establishment of an environmental chapter in FTAs and promoting trade liberalization of environmental goods and services will benefit the environmental industry, economic growth and employment in FTA partners.

Fourthly, it is to promote international environmental protection progress by using measures such as trade-related sanction. Though there are international environmental conventions, which include compliance mechanisms, these compliance mechanisms are not binding and compulsory. While the dispute settlement in trade agreements is binding, thus many workshop participants shared the views that including international environmental conventions in an environmental chapter will further highlight the obligations to implement these conventions and help in their implementation by using judicial process to promote effective environmental protection.

Fifthly, it is to improve environmental cooperation. Environmental cooperation will be improved by the approval of side agreements and the enhancement of the multilateral dialogue on environmental cooperation. There are various objectives when highlighting environmental cooperation, such as emphasizing mutual environmental problems.

(2) Reasons for non-inclusion of environmental provisions

Though there is a trend to promote the inclusion of environmental provisions in FTAs, it has not been universally accepted among APEC economies. According to participants from the workshop, the environmental provisions are affected by the followings aspects: the awareness of the negotiators and their capacity and skills; the contents of negotiations, for example trade liberalization of environmental goods and services is easy to accept and the conformity to environmental standards is much more difficult to

accept; it is easier to accept if it is a bilateral agreement, but difficult if it is a multilateral agreement. There are several reasons why environmental provisions are not included in FTAs, as described below.

Firstly, extra inputs are concerned, such as funds for establishing institutions to supervise and manage the implementation of environmental obligations, investment on human resources and financial input for enhancing environmental law implementation, funds for training officials.

Secondly, some workshop participants mentioned that environment is not taken as a priority in all trade agreements. This does not mean environmental protection and international environmental cooperation are not political priorities, but some believe trade agreements are not the optimal place to consider environmental issues. For example, in Australia, though sustainable development and environmental protection are priorities, and it is mentioned in National Strategy for Ecologically Sustainable Development (NSES) that “to pursue the integration of higher level of trade and environmental policies” is of importance, it holds the opinion that trade negotiations and environmental protection should be considered separately.

Thirdly, some cases indicated that environmental issue could be an obstacle to reach a trade agreement rapidly and the parties may discuss the environmental provisions during the upgrading negotiations of the trade agreement. For example, Japan has set up an ambitious plan for future FTAs, but if without strong willingness of the counter-Parties, Japan will not be too active in negotiations of environmental provisions.

Fourthly, some workshop participants reflected that domestic coordination could be an internal reason the first problem that needs to be addressed if they want to negotiate on environmental provisions is internal, such as lack of clear objective and strong motivation, lack of capacity, obstacles of coordination between trade department and environmental departments.

Fifthly, domestic environmental laws and regulations or implementation systems are not ready to accept the inclusion of environmental provisions in FTAs. For example, Mexico was still establishing its environmental law when participating in NAFTA negotiations.

Sixthly, the presence of one or more of the issues identified above makes it difficult to make substantive environmental commitments.

Seventhly, some workshop participants mentioned that distance could be a reason. If the two parties are facing some mutual environmental problems, or sharing common environmental conditions, they are willing to address these problems together. However, the negotiating Parties would not be interested in the inclusion of environmental provisions if they don't face mutual environmental problems due to the long geographical distance.

Even though there are many difficulties, in fact there are more and more trade agreements which include environmental provisions in order to obtain more trade opportunities. For example, the US require inclusion of detailed environmental chapters in trade agreements, thus those partners wishing to sign FTAs with the US have to accept these requirements in order to obtain trade opportunities with US.

3. Content Analysis of Environmental Provisions

Due to the different circumstances and objectives that FTA parties bring, the purpose, nature, and scope are different, and the content and scope of the environmental provisions are different. However, the content of environmental provisions in FTAs has evolved from non-existence to a significant presence, from short to long, from simple to complex, from scattered through other chapters to concentration in a special chapter. The main environmental provisions covered in FTAs and their locations have a lot of similarities.

3.1 Main Environmental Provisions in FTAs/RTAs

(1) Environmental provisions in body text of FTAs/RTAs

Originally, environmental provisions were generally in the preamble as principled descriptions or in the exceptions. As time went by, they gradually appeared in the chapters on investment, sanitary and phytosanitary measures, technical barriers to trade, technological cooperation, and formed an independent chapter nowadays. Environmental provisions in FTAs come close to covering all policies and measures related to trade, not only specifically environmental protection levels, but the relationship between trade and environmental conventions, dispute settlement, public participation, institution arrangements, also cover fishing subsidies, biodiversity, and environmental goods and services and many other aspects. Environmental provisions in FTAs mainly appear in the following chapters or articles.

General exceptions: The majority of FTAs refer to environmental issues in exceptions. 60% of FTAs in force that have been studied referred to environmental exception. Detailed content usually quoted article 20 (b) of The General Agreement on Tariffs and Trade (GATT 1947) which entered into force in 1947, in which it recognized measures “*necessary to protect human, animal or plant life or health*” were exceptions.

Principled descriptions in preamble: FTAs, especially that have been signed recently, refer to environment or sustainable development issues in the preamble, which is widely accepted. 42% of FTAs in force that have been studied referred environment or sustainable development issues in the preamble. No matter what kind of economic situations the contracting parties are in, both developed ones or developing ones, or between developed economy and developing economy, the FTAs all attached great importance to environmental protection or sustainable development, and took them as basic principles. Detailed content usually quoted the description on sustainable development in *Marrakesh Agreement Establishing the World Trade Organization*, or description on three pillars of sustainable development in *Rio Declaration and Agenda 21*, emphasized the principle that trade should not be promoted on the compromise of sustainable development, or the implementation of trade agreements should be consistent with sustainable development and environmental protection. However, the wording of each FTA is different. For example, the US-Morocco FTA stated in the preamble that the parties desire to strengthen the development and enforcement of labor and environmental laws and policies, promote basic workers' rights and sustainable development, and implement the Agreement in a manner consistent with environmental protection and conservation. The Australia-Chile FTA stated in the preamble that the parties resolved to implement this Agreement in a manner consistent with sustainable development and environmental protection and conservation. The Chile-Panama FTA stated in the preamble that the agreement should be implemented in a manner consistent with environmental protection, and economic development should be promoted in a manner consistent with environmental protection and sustainable development.

Articles on environmental measures in investment chapter: 20% of FTAs in force that have been studied referred to the relationship between environment and trade in the investment chapter. For example, the article 10.11 of the US-Colombia FTA, named "*investment and trade*", stated that "*Nothing in this chapter shall be construed to prevent a party from adopting, maintaining, or enforcing any measure otherwise this*

chapter that it considers appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns.” the agreement between Japan and the Republic of Indonesia for an Economic Partnership stated in the investment chapter that each party recognizes that it is inappropriate to encourage investments by investors of the other Party through relaxing its environmental measures. To this effect, each Party should not waive or otherwise derogate from such environmental measures as an encouragement for establishment, acquisition, or expansion of investments in its area.

Sanitary and Phytosanitary (SPS): Often all objective of this chapter is to protect human, animal or plant life or health. About 26% of FTAs covered this article or had similar one, such as chapter 6 in US-Peru FTA, chapter 8 in US-Republic of Korea FTA, chapter 6 in US-Panama trade promotion agreement, chapter 6 in US-Oman FTA, chapter 6 in US-Colombia trade promotion agreement, chapter 6 in Pakistan-Malaysia trade promotion agreement, chapter 6 in Peru-Singapore FTA.

Technical barriers to trade (TBT): Frequently an objective of this chapter is to promote cooperation on regulations to prevent health, safety, and environmental risks. 22 FTAs contained this article or had similar one, such as article 90, 96 in China-New Zealand FTA, chapter 7 in Peru-Singapore FTA.

Technical cooperation: In the cooperation chapter, sustainable development, environmental cooperation, or environmental technical cooperation was included. For example, environment was identified as one cooperation aspect by article 102 in Japan-Brunei Darussalam FTA, and chapter 14 in China-New Zealand FTA stated that the Parties shall enhance their communication and cooperation on labour and environment matters through both the Memorandum of Understanding on Labour Cooperation and the Environment Cooperation Agreement between the Parties.

Government procurement: The parties may adopt or implement some measures or

special technologies in government purchasing process to protect human, animal or plant life or health, such as the article 9.16 of government procurement chapter in US-Chile FTA, government procurement in chapter 14 in Canada-Peru FTA.

Market access of environmental services sector: According to four modes of supply of services, which are cross-border supply, consumption abroad, commercial presence, and presence of natural persons, schedules of specific commitments on environmental services listed limitations on market access and national treatment based on its sub-sector. According to the Provisional Central Product Classification (CPC prov.), environmental services can be categorized into 7 sub-sectors, i.e. Sewage services (CPC 9401), Refuse disposal services (CPC 9402), Sanitation and similar services (CPC 9403), Cleaning services of exhaust gases (CPC 9404), Noise abatement services (CPC 9405), Nature and landscape protection services (CPC 9406) and Other environmental protection services (CPC 9409). As one of 12 service sectors, market access on environmental services needs to be negotiated.

Independent environmental chapter: By January 2016, there were 36 FTAs which included independent environmental chapter. Though the percentage was not very large, environmental chapter indeed covered core elements, including articles with specific or substantive obligations, which was an important trend for future FTAs. Independent environmental chapter is also the study focus of this report, and will be analyzed in detail in latter chapters.

Dispute settlement: In early period, environmental law enforcement was ruled out by dispute settlement mechanism of FTAs, or was limited in its scope. However, in recent years, environmental law enforcement is no longer excluded, and is covered in independent environment chapters. In chapters of dispute settlement, it also stresses that dispute settlement is applicable to environmental articles and environmental law enforcement, and emphasizes the binding character of environmental law enforcement.

Most of the FTAs signed by the US cover environmental dispute settlement. For example, chapter 22 “Institutional Provisions and Dispute Settlement” in US-Korea FTA states that “*If the Parties fail to resolve a matter within 60 days of the delivery of a request for consultations under Article 19.7 (Labor Consultations) or 20.9 (Environmental Consultations and Panel Procedure), either Party may also refer the matter to the Joint Committee by delivering written notification to the other Party*”¹².

Environmental articles in trade penalization: For example, European Free Trade Association Convention stated that relevant rules and enforcement cannot violate the regulations for public policy, public security, public health and the environment, and that if there are serious economic, social or environmental problems, member states can unilaterally take appropriate measures in accordance with clause 41.

Apart from the above, chapters or articles of objectives, institutional arrangements, transportation, energy, trade facilitation, sector policy, labor, tourism, agriculture, subsidy, forestry, fishing also cover issues of environment or sustainable development.

(2) Content in an independent environmental chapter

Independent environmental chapter or affiliated environmental cooperation agreement are the most important and the most prominent form of environmental articles in FTAs/RTAs.

Generally, there is no unified format of content and form of environmental chapter in FTAs. Based on analysis of FTAs which included environmental chapter signed by the US, EU, Republic of Korea, and other economies, we can see that environmental chapters in general tend to include the following main elements.

Definition and Scope

¹² Source: https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file973_12721.pdf

This provision gives out the definition and scope of the environmental chapter, such as the definition of the environmental laws, regulations and measures, etc.

Level of Protection

This provision usually claims that the Parties should not to encourage investments by relaxing its own level of environmental protection.

Effective Enforcement of Environmental Laws, Regulations and Measures

In order to ensure effective environmental protection, the Parties shall not derogate from environmental laws, regulations and measures to promote trade.

Institutional Arrangement

It always covered the establishment of committees, contact points, advisory groups and work arrangements in order to ensure the effective enforcement of the environmental chapter.

Procedural Arrangement

This provision usually gives out arrangement on the procedural matters which are related to environment.

Transparency

This provision lists procedures and arrangements to ensure public participation, commenting on environmental laws, regulations and measures, and policy makings, as well as transparency procedures.

Bilateral Cooperation

This provision may include environmental information exchange, environmental technical cooperation, etc.

Dispute Settlement

This provision may include consultations and/or the establishment of an expert group mechanism, environmental dispute will be subject to the mechanism of state-to-state dispute settlement in rare FTAs.

Multilateral Environmental Agreement (MEA)

The Parties recognize the importance of the multilateral environmental agreement, and shall improve the implementation of the agreements to which they are both contracting parties, and fulfil their obligations under these agreements.

Environmental Impact Review

This provision requests the Parties to conduct regular and irregular review the environmental impact of the FTAs.

Financial Arrangement

This provision may include financial resource and financial arrangements.

Apart from the traditional elements, issues of illegal logging, fishing subsidies, biodiversity, climate change and environmental goods and services may also appear (see table 3.1).

Table 3.1 Content in an independent environmental chapter of FTAs/RTAs

N o.	FTAs/RTAs	Time of entry in force	Environmental chapter											
			Definiton and scope	Level of protection	Effective enforcement of environmental laws, regulations and measures	Institutional arrangement	Procedural arrangement	transparency**	Bilateral cooperati on	Financial arrangement	Dispute settlement	MEA	Environmental impact review	
1	EFTA-Hong Kong, China	01/10/2012	√	√	√							√	√	
2	EFTA-Montenegro	01/09/2012	√	√	√							√	√	
3	Republic of Korea-Peru	01/08/2011	√	√	√	√				√		√	√	√*
4	Republic of Korea-Turkey	01/03/2013	√	√	√	√			√	√		√	√	√
5	Canada-Peru	01/08/2009			√				√	√		√	√	
6	Canada-Colombia	15/08/2011		√	√				√	√		√	√	
7	Canada-Jordan	01/10/2012			√				√			√	√	
8	Canada-Panama	01/04/2013			√				√	√		√	√	
9	US-Singapore	01/01/2004	√	√	√	√	√			√		√***	√	√
10	US-Chile	01/01/2004	√	√	√	√	√			√		√		√
11	US-Australia	01/01/2005	√	√	√	√	√			√		√		√
12	US-Morocco	01/01/2006	√	√	√		√			√		√		√
13	US-Central America-Dominican Republic	01/03/2006	√	√	√	√	√			√		√		
14	US-Bahrain	01/08/2006	√	√	√	√	√			√		√		
15	US-Oman	01/01/2009	√	√	√	√	√			√		√		
16	US-Peru	01/02/2009	√	√	√	√	√			√		√	√	
17	US-Colombia	15/03/2012	√	√	√	√	√			√		√	√	
18	US-Panama	31/10/2012	√	√	√	√	√			√		√	√	
19	US-Republic of Korea	15/03/2012	√	√	√	√	√			√		√	√	
20	US-Jordan	17/12/2001	√	√	√					√		√		
21	Nicaragua-Chinese Taipei	01/01/2008	√	√	√	√	√			√		√	√	√

N o.	FTAs/RTAs	Time of entry in force	Environmental chapter										
			Definiton and scope	Level of protection	Effective enforcement of environmental laws, regulations and measures	Institutional arrangement	Procedural arrangement	transparency**	Bilateral cooperation	Financial arrangement	Dispute settlement	MEA	Environmental impact review
22	EU- Caribbean Community	01/11/2008	√							√	√		
23	EU-Cameroon	01/10/2009	√							√			
24	EU-Papua New Guinea-Fiji	20/12/2009	√		√	√						√	
25	EU- Republic of Korea	01/07/2011	√	√	√	√		√	√		√	√	√
26	EU-Columbia& Peru	01/03/2013	√	√	√	√		√	√		√	√	√
27	EU-Georgia	01/09/2014	√	√					√			√	√
28	New Zealand- Chinese Taipei	01/12/2013		√	√	√		√	√		√		√
29	China-Switzerland	01/07/2014		√					√	√		√	
30	Hong Kong, China-Chile	09/10/2014	√	√	√	√			√	√	√	√	√
31	Canada – Honduras	01/10/2014		√	√			√	√		√	√	
32	Canada - Republic of Korea	01/01/2015	√	√	√	√	√	√	√		√	√	
33	EFTA - Bosnia and Herzegovina	01/01/2015	√	√	√	√			√		√	√	√
34	Republic of Korea – Australia	12/12/2014		√	√	√	√		√		√	√	
35	Republic of Korea - New Zealand	20/12/2015	√			√		√	√		√	√	√
36	China - Republic of Korea	20/12/2015	√	√	√	√			√	√	√	√	√
In total			29	27	30	23	14	10	30	5	30	30	18

Source: WTO website.

Note: * Peru stressed that environmental impact review in Rep. of Korea-Peru FTA is referred to as an article that the Parties “shall strive” to implement.

** All US FTAs include transparency and notification in a separate chapter rather than in environmental chapter, thus beyond the scope of this study.

*** Partial dispute settlement

3.2 Environmental Cooperation Provisions in FTAs/RTAs

Nowadays, most signed FTAs/RTAs include Environmental Cooperation Provisions (ECPs) according to the statistics in this report, but the modality, depth and scope of the Environmental Cooperation vary in different FTAs. From the perspective of modality, ECPs are included either in the body of the environment chapter in the FTAs or in the side agreements, such as in an Environment (Sustainable Development) Chapter or in Environmental (Technology) Cooperation Agreements. In terms of depth and scope, the range of the environmental cooperation can vary from one specific technology area to fully-fledged program. Some workshop participants mentioned that it is very helpful and useful for enhancing co-operative work in the environmental area if ECPs are included in FTAs/RTAs. Meanwhile, Environmental Cooperation can only work effectively if the adequate resources - institutional, human and financial - are in place.

(1) General analysis

All signed FTAs/RTAs which include an environmental chapter or environmental side agreements, have ECPs.

In terms of distribution, ECP are mainly included in FTAs signed by the EU, the US and Canada. There are 25 FTAs which have ECPs in an environmental chapter involving these 3 economies, accounting for 70%.

In terms of time series, the FTAs including ECPs in an environmental chapter have all been signed since 2000, and especially after 2005, and most of them appeared in FTAs signed by the US, EU and Canada. The US and Canada were first to include ECPs in their FTAs, due to the influence of NAAEC. However, the EU began putting ECPs in the sustainable development chapter of the EU-CARIFORUM States Economic Promotion Agreement signed in 2008.

In terms of the places, ECPs may be placed not only in environmental or sustainable development chapters, but also in other places, such as ECPs of the US-Jordan FTA which appears in a Joint Statement, the ECPs of NAFTA which appears in NAAEC, and Canada signed Environmental Cooperation Agreements affiliated to FTAs with both Chile and Costa Rica.

In terms of contents, ECPs may cover a range of activities. These may include, inter alia, enhancing protection of the environment in the territories of the Parties; mainstreaming environmental sustainability into all aspects of cooperation and interaction between the Parties; promoting compliance with environmental laws, regulations, procedures, policies, and practices; improving the scientific and technical capacity and management of natural resources and the adoption of environmental friendly policies, production processes, and services; increasing transparency and public participation in environment related discussions and processes; enhancing cooperation on specific environmental protection area; establishing framework for environmental cooperation; etc.

(2) Specific areas of environmental cooperation

Some workshop participants reflected that as environmental cooperation mechanisms are one of the key ways to guarantee the implementation of environmental commitments in FTAs, they cover nearly all the related environmental matters which arise in FTAs/RTAs, including supporting the implementation of MEAs, trade liberalization in environmental goods and services, enhancement of compatibility of environmental measures of both Parties (including laws, regulations, standards and so on), policy and technical cooperation on pollution prevention, coordination and unity of environmental monitoring indicators, joint implementation of environmental impact assessment on the FTA, establishment of institution, and so on. According to the discussion in the workshop, we demonstrate four typical areas of environmental

cooperation of great concern in this study, i.e. supporting the implementation of MEAs, promoting dissemination of environmental goods and services as well as technologies, capacity building, and cooperation on specific technology, relevant fora and mutual supportive in relation to MEAs.

Supporting the implementation of MEAs

There is a tendency to ensure the implementation of commitments of the Parties undertaken in MEAs through environmental cooperation mechanisms.

At its most basic, the most popular form is for Parties to make general statements on supporting the implementation of MEAs in the Preamble of FTAs/RTAs. Taking the US-Chile FTA as an example, both Parties state, in the Preamble, that they are resolved to take measures to protect, and improve the environment, including through MEAs to which both Parties are Parties. With the further development of FTAs, in order to emphasize support of MEAs, this provision was put into an environmental chapter. Taking the Republic of Korea-US FTA as an example, the second article in the environmental chapter relates to cooperation on MEAs, with the following stipulation.

Box 3.1 Provisions of supporting MEAs in Korea-US FTA

ARTICLE 20.2 ENVIRONMENTAL AGREEMENTS

A Party shall adopt, maintain, and implement laws, regulations, and all other measures to fulfil its obligations under the multilateral environmental agreements listed in Annex 20-A (covered agreements).

The KORUS FTA not only established an article for supporting implementation of MEAs, but also listed the MEAs as an annex, which make the commitment to the implementation of MEAs more clear and specific.

Promoting trade liberalization in EGS and dissemination of environmental technologies

Liberalizing trade in environmental goods and services and facilitating dissemination of environmental technologies is can be an important area of environmental cooperation. It can promote green growth and development by liberalizing the trade, and reducing the cost, of environmental goods and services and facilitating the dissemination of environmental technologies. The articles related to trade liberalization in environmental goods and services and dissemination of environmental technologies mainly appear in the environmental chapter of FTAs or side agreements on environmental cooperation.

Box 3.2 Cooperation on EGS in the Japan-Mexico FTA

Article 147 Cooperation in the field of Environment

1. The Parties, recognizing the need for environmental preservation and improve to promote sound and sustainable development, shall cooperate in the field of environment.

Cooperative activities under this Article may include:

...

C) encouragement of trade and dissemination of environmentally sound goods and services; and

...

Box 3.3 Cooperation on EGS in the China-Switzerland FTA

ARTICLE 12.3

Promotion of the Dissemination of Goods and Services Favouring the Environment

1. The Parties shall strive to facilitate and promote investment and dissemination of goods, services, and technologies beneficial to the environment.
2. For the purpose of paragraph 1, the Parties agree to exchange views and will consider cooperation in this area.
3. The Parties shall encourage cooperation between enterprises in relation to goods, services and technologies that are beneficial to the environment.

According to the analysis, the US has vigorously promoted trade liberalization in environmental goods and services and the dissemination of environmental technologies through environmental cooperation, and related articles can be found in nearly all FTAs signed by the US. Meanwhile, the US is also devoted to concluding the APEC list of Environmental Goods, and improves trade liberalization in environmental goods and services in the APEC area. The reason why the US is so proactive is that, on one hand, it has strong competitiveness in the environmental goods and services sector and possesses advanced technologies; on the other hand, the Trade Act of 2002 set an objective for seeking market access for American environmental technologies, goods and services by reducing tariff and non-tariff barriers.

It can be concluded liberalizing trade in environmental goods and services and facilitating dissemination of environmental technologies is an important issue for environmental cooperation.

Capacity building

Although capacity building is distinguished from environmental cooperation in some studies, it is an important part of the implementation of environmental commitments for developing parties, and it is also an important way to promote the environmental

management of developing parties and realize cooperation between developed and developing parties. Our research found that capacity building is always included in environmental cooperation mechanisms, especially cooperation between developed and developing parties.

Taking the Japan-Mexico FTA as an example, in the article on environmental cooperation, it mentioned:

“Article 147 Cooperation in the field of Environment

1. The Parties, recognizing the need for environmental preservation and improve to promote sound and sustainable development, shall cooperate in the field of environment.

Cooperative activities under this Article may include:

...

b) promotion of capacity and institutional building to foster activities related with the Clean Development Mechanism under Kyoto Protocol to the United Nations Framework Convention on Climate Change, as may be amended, by means of workshops and dispatch of experts, and exploration of appropriate way to encourage the implementation of the Clean Development Mechanism projects;

...”

In this article, it can be found that capacity building is the basis for continuing environmental cooperation. Another example is the capacity building provision that can be found in Article 12.5 “Bilateral Cooperation” of the China-Switzerland FTA, which is as follows:

“ARTICLE 12.5 Bilateral Cooperation

...

3. Environmental cooperation between the Parties shall also focus on exchange of information and expertise, capacity building and training, seminars and workshops, internships and scholarships, as well as monitoring international developments in this area, etc. Such activities should also address the issue of technology cooperation and transfer, especially regarding environmentally friendly technologies.”

It can be found that capacity building is an important part of realizing environmental cooperation and commitments in the practice of concluding FTAs between developed and developing Parties. This is a key factor to balancing the concern of developed Parties on environment and the weak environmental management of developing Parties, and is also an important indicator for assessing whether the FTA is a high-level agreement.

Cooperation on specific areas of environmental protection

Besides building a framework for environmental cooperation, Parties to some FTAs also make commitments to take actions to cooperate in specific environmental areas in which they have a mutual interest.

Taking the recently signed TPP as an example, besides establishing a cooperation article in the chapter on environment, the Parties also made a statement to cooperate in more specific environmental areas, including protection of the ozone layer, protection of the marine environment from ship pollution, and biodiversity, etc.

3.3 Environmental Impact Assessment of FTAs/RTAs

Environmental impacts of trade activities are well known. With the EIA of FTAs, we are able to understand the negative environmental impacts and risks arising from the growth of trade following the signing of the FTAs, so as to formulate appropriate

policies and measures to reduce or avoid those negative impacts and risks. Carrying out EIA is therefore increasingly becoming a key issue in the FTA process.

Currently, the assessment of the environmental impacts of an FTA takes various forms, including Environmental Assessment, Environmental Review (ER), and Sustainability Impact Assessment (SIA). Despite the various names and different processes and methodologies used, they are all aimed to assess the various potential post-FTA impacts and the impacts that have been generated after the signing of the FTA.

(1) Overview and Characteristics of EIA of FTAs

Although, the importance of assessing environmental impacts of FTAs has been widely recognized, economies at different stages of development have their own views about EIA of FTAs. According to our current statistics, 13 out of 36 FTAs with environment-related sections stipulate that environmental (or sustainability) impacts should be assessed.

It should be noted that, although EIA is not mentioned in the environment-related sections of many FTAs signed by the US and Canada, both economies have, as required by their related domestic law, assessed the environmental impacts of these agreements during negotiations.

Based on the above statistics, the EIA of FTAs mainly has the following characteristics:

Firstly, developed economies or regions show a more positive attitude towards the provisions of EIA.

Table 3.2 EIA-related Provisions in FTAs

No.	FTA	Location of EIA-related Provisions	Assessment Methodology Stipulated in the Provision
1	Republic of Korea-Peru FTA	Article 19.3 EIA	Environmental Assessment
2	Republic of Korea-Turkey FTA	Article 5.10 Cooperation	SIA
3	Canada-EU FTA	Article X.12 Cooperation	Impact Assessment

		on Environmental Issues	
4	Canada-Jordan FTA	Article 6 Environmental Assessment (Canada-Jordan Agreement on the Environment)	Environmental Impact Assessment of “projects”
5	US-Panama FTA	Appendix 17.10 Environmental Cooperation	Environmental Assessment
6	US-Central America-Dominican Republic FTA	Appendix 17.9 Environmental Cooperation	Environmental Assessment
7	EU-Colombia and Peru FTA	Article 279 SIA	SIA
8	EU-Republic of Korea FTA	Article 13.10 SIA	SIA
9	EU-Singapore FTA	Article 13.14 Review of Impact on Sustainable Development	SIA
10	Chinese Taipei-Nicaragua FTA	Program of Work and Priority Cooperation Areas	Environmental Assessment
11	EFTA-Bosnia and Herzegovina	Location of EIA-related Provisions	Review
12	Republic of Korea-New Zealand	Article 16.6 Review of Environmental Impacts	Environmental Impact Review
13	China-Republic of Korea	Article 16.6 Environmental Impact	Environmental Impact Review

Source: Tabulated by the authors from information on the WTO website.

According to official statistics, the FTAs with EIA-related provisions were signed mainly by the US, Canada and the EU. Under the influence of the EU and the US, Republic of Korea has also been positive in this regard.

Secondly, some economies conduct not only ex-ante assessment but also ex-post assessment of FTAs.

According to the agreements already signed, EIA-related provisions mainly focus on EIA and review of the signing and implementation of FTAs, and both ex-ante and ex-post assessments may be applied. For example, Article 13.10 of the FTA between the EU and Republic of Korea stipulates that, “*Both Parties commit to reviewing, monitoring and assessing the impacts of the implementation of this Agreement on sustainable development...*” In addition, the US, Canada and the EU also carried out assessments on the implementation of environmental provisions. For example, the US Government Accountability Office (GAO) reviewed the implementation of the FTAs signed with Jordan, Singapore, Chile and Morocco, indicating that the projects planned

in the environmental provisions in related FTAs have been implemented, with the Ministry of Environment being established in Jordan, the Endangered Species Act being amended in Singapore, and a new legal framework for environmental protection being created in Morocco. In addition, the North American Commission for Environmental Cooperation also conducted ex-post assessment of the implementation of the NAAEC.

Although EIA is not mentioned in the terms of FTAs signed by such economies as the US and Canada, they are required to review the impacts of these agreements on environment during negotiations according to their domestic law.

In Executive Order No.13141, the US institutionalized the incorporation of environmental considerations into the development of its trade negotiating objectives, indicating that the USTR “...shall conduct the ERs of the agreements” (November 1999). Meanwhile, it also developed the Guidelines (2000) for the implementation of this Executive Order. The Trade Act of 2002 further requires the President to conduct ERs of future trade and investment agreements, and report to the Committee on Ways and Means of the House of Representatives and the Committee on Finance of the Senate on such reviews. Therefore, while negotiating a trade agreement, the US invariably conducts ex-ante assessment of the environmental impacts of the agreement, and develops interim and final review reports, as shown in Table 3.3.

Table 3.3 US FTAs with EIAs

FTA	Interim Review	Final Review
US-Australia	✓	✓
US-Bahrain	✓	✓
US-Central America-Dominican Republic	✓	✓
US-Chile		✓
US-Colombia	✓	✓
US-Jordan		✓
US-Republic of Korea	✓	✓
US-Morocco	✓	✓
US-Oman	✓	✓
US-Panama	✓	✓
US-Peru	✓	✓
US-Singapore		✓

FTA	Interim Review	Final Review
US-Thailand	✓	
Trans-Pacific Partnership (TPP)	✓	
US-U.A.E	✓	

Source: Tabulated by the authors from information on the website of the USTR.

Similar to the US, the practice of EIA on Canada's trade agreement is authorized mainly by two documents: the 2010 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals and the 2001 Framework for Conducting Environmental Assessment of Trade Negotiations. Canada believes that an ex-ante environmental assessment of trade negotiations is an important tool for developing sustainable development policies. An environmental assessment conducted during a trade negotiation can achieve two key objectives: on one hand, to identify the potential risks to the environment which may be generated from the implementation of the trade agreement, and to provide possible solutions and policies to address these risks through the FTA negotiations (e.g. enhancing cooperation between the contracting parties). In addition, EIAs contribute to more open decision-making by engaging representatives from other levels of government, the public, the private sector and non-governmental organizations in the public participation process of the EIA. In addition, due to a full discussion by all parties, environmental assessments can also improve overall coherence of policy development and environmental protection by assisting decision-makers to understand environmental implications of their proposed trade policies.

Thirdly, the methodologies used to assess environmental impacts have become increasingly mature, the contents however vary.

Developed economies have been working in the field of EIA of FTAs for many years and therefore such organizations and economies as UNEP, OECD, the US, Canada, the EU and New Zealand have all developed assessment methodologies. As the practice of EIA of FTAs has been carried out in the US, Canada, the EU and New Zealand for many years, the methodologies developed by these economies are relatively well represented

worldwide.

Among these, North American economies (US and Canada) carry out Strategic Environmental Assessment (SEA) according to the requirements of their domestic law. In New Zealand, a National Impact Assessment (NIA) is required with respect to any new trade or investment agreement. The analysis should examine the economic, social, cultural, financial and environmental impacts of the agreement entering into force for New Zealand, and of the agreement not entering into force for New Zealand. In the EU, on the other hand, a SIA is required for all trade negotiations to assess the implications of the three pillars of sustainability, namely economy, society and environment.

Generally speaking, the environmental analysis of New Zealand's NIA is similar to the methodology of SEA used in the US and Canada, the SIA applied by the EU however is substantially different.

Fourthly, economies entrust different agencies to implement EIA of FTAs.

The agency of each economy to implement EIA of FTAs varies according to the government department taking the lead in trade negotiations, the administrative system and the understandings of EIA.

According to the Section Three of the Executive Order No. 13141, the United States Government specifies as follows: “(a) *Implementation.* USTR and the Chair of the Council on Environmental Quality shall oversee the implementation of this order...(b) *Conduct of ERs.* The Trade Representative, through the interagency Trade Policy Staff Committee (TPSC), shall conduct the ERs of the agreements under section 4 of this order.” In the light of this Order, government departments undertake EIA of trade agreements of the US.

In Canada, conducting EIA of FTAs is authorized by the Cabinet Directive on the

Environmental Assessment of Policy, Plan and Program Proposals and the Framework for Conducting Environmental Assessment of Trade Negotiations. The former generally specifies the procedure, methodology and departments and agencies of implementing the environmental assessment of policy, plan and program proposals, while the latter refines the environmental assessment of FTAs. The Framework for Conducting Environmental Assessment of Trade Negotiations indicates that Environmental Assessment (EA) Committees will be formed to undertake the environmental assessments required to complete the trade agreement negotiations. The membership of the EA Committees will vary according to the nature of the proposed negotiations. Coordinated by Global Affairs Canada, EA Committees will generally include representatives from federal government departments and agencies. Environment and Climate Change Canada and the Canadian Environmental Assessment Agency, relevant federal departments and other sub-federal jurisdictions will always be represented. When necessary, the EA Committees may elect to engage independent research bodies to undertake some of the required analysis. The scope of the assessment is on potential environmental effects of the FTA.

Unlike the US and Canada, in the EU, the SIA is conducted by external consultants. The European Commission and its member then provide feedback on the follow-up measures proposed by the assessment through formal submissions. The concerns of relevant interest groups both in the EU and in the partners will all be integrated into the final report of the SIA.

(2) Significance of conducting EIA of FTAs

Although the practice of EIA of FTAs has not been fully carried out are not present in all FTAs, conducting assessment on environmental impacts both in the negotiation process and after the implementation of the agreement is of obvious advantage. Firstly, environmental assessments improve overall policy coherence at the domestic level, and

assist decision-makers to understand the environmental implications of relevant trade policy, thereby providing an effective way to solve related environmental problems. Secondly, environmental assessments assist in identifying the most likely or significant environmental impacts that can be expected from a trade agreement, so the negotiating parties are able to adopt appropriate measures to respond to related issues early in the negotiating process. Thirdly, government policy makers can be informed by the assessments of the critical environmental impact information identified in a timely manner, so they can modify the overall proposal design to integrate environmental protection policy and trade policy. Further, environmental assessments provide feedback for future negotiations. Specifically, EIA of FTAs has the following roles:

Firstly, they enhance the mutual understanding of the parties. The practice of EIA involves massive information collection, and this information is not limited to economic and trade-related indicators used in the trade negotiations. While most work focuses on the partner that is conducting the assessment (with exception of the EU's SIA, which involves EIAs of both sides of the negotiation), EIAs also cover a large amount of related information on trade and economy, including information of the natural environment, and social and economic development of the trade partner. It should particularly be noted that this information can help the negotiators to better understand formulating their positions in the negotiations (for example, EIA can reveal significant environmental impacts of a particular sector), or help both sides to better design future environmental cooperation frameworks and projects.

Secondly, analyzing the possible environmental impacts and risks contributes to the development of enhancement or mitigation measures. Compared to collecting economic and social information, EIA pays more attention to the focus on the impacts and risks that the implementation of the agreement might bring to the environment. By examining environmental pressures caused by possible subsequent changes in trade volume and structure, as well as environmental impacts of trade policy adjustments

following the signings of FTAs, potential environmental risks can be identified. During the negotiations therefore, appropriate countermeasures can be formulated or commitments to associated projects on environmental cooperation can be made to mitigate these risks. After the implementation of the trade agreement, existing problems can be identified via the assessment of the implementation status, so that adjustments of existing policies can be further arranged to reduce the negative impacts on the environment.

Thirdly, it affects the negotiation process to a certain degree. Actually, compared to the other benefits of EIA, the public is more concerned about whether the assessments lead to any changes to the negotiation including the negotiating positions, final texts, and the development of countermeasures. In reality however, there have been very few changes of the negotiating positions and final texts. In the practice of the EU, only a few were significantly affected by SIA, and the impacts were not environmental in nature. However, EIA is not without any contribution in an FTA negotiation. There are many instances that outline the important changes made by EIA: the development of proactive policies such as capacity building of environmental management or increased cooperation on environmental management capacity. A further impact of the assessment process is that it can assist in the design of associated environmental cooperation framework or trade-related environmental capacity building. The US-Chile Environmental Cooperation Agreement, for example, set out the work plan for EIA in Article Eight. The EU's Critical Strategic Impact Assessment of the trade agreement with the Gulf Co-operation Council directed its intensified focus on improving conditions for foreign direct investment.

Fourthly, it increases the interaction between environment and trade departments. FTAs are economic agreements. Before the introduction of EIA, trade negotiators and policy-makers did not take environmental impacts as issues that they must consider, and few economic officials saw the need to interact with their own environmental colleagues.

However, as a result of the assessment exercise, environmental officials will certainly be brought in to make paradigm changes to traditional FTA negotiations. Today, trade officials are increasingly identifying the need to pay attention to environmental impacts in the negotiations, and they, in some cases, even raise environmental concerns that need to be considered to their environmental counterparts. A crucial prerequisite to this change is a top-level buy-in of the trade impacts on the environment within the trade department. Further, as the trade partner is also involved to some extent in the assessment, the same effect may also be seen in the partner. These changes also make the environmental officials increasingly important.

Fifthly, it reinforces public participation. It goes without saying that the incorporation of EIA into FTA negotiations enhances the involvement of the public in trade policy-making. At present, all mainstream environmental assessments (including SIA of the EU) involve extensive public participation and public comment gathering at all stages of the process, from the initial indicator screening to final review. This allows a voice of those who might otherwise have little influence on trade policy direction, and may result in increased public understanding of the trade-environment interaction. Public participation in EIA to date has positively contributed to trade agreement negotiations in the following three aspects: First, it helps to collect expertise and recommendation from a greater range of experts. Second, it ensures that as many relevant issues as possible can be brought to the assessors for consideration (for example, the concern over migratory birds was first brought to the US-Andean regional trade agreement negotiations in the stage of public participation). Third, it provides legitimacy and accountability to the resulting trade policies.

4. Environmental Provisions in FTAs/RTAs in APEC

As a regional cooperation organization, APEC is committed to promoting green growth and sustainable development. Recognizing the importance role of FTAs/RTA in rule-making, APEC and its member economies collectively have a wide experience in this regard.

4.1 Relevant Policies in APEC

As stated in 1994 Leader's Declaration, "our objective to intensify development cooperation among the community of Asia-Pacific economies will enable us to develop more effectively the human and natural resources of the Asia-Pacific region so as to attain sustainable growth and equitable development of APEC economies." Guided by this objective, APEC continues to support and encourage cooperation on environmental goods and services which can further influencing the environmental rule-making under trade framework. In this case, more and more APEC member economies have included the environment and trade issues in FTAs/RTAs in order to transform nonbinding APEC environmental commitments to binding environmental provisions in FTAs.

2005 APEC leaders pointed out that they "agreed that high-quality RTAs/FTAs were important avenues to achieve free and open trade and investment and called for ongoing work to pursue high quality, transparency and broad consistency in RTAs/FTAs in the region ... welcomed the APEC Trade Facilitation Model Measures for RTAs/FTAs that would serve to function as a meaningful reference for negotiating RTAs/FTAs, and called for the development of model measures for as many commonly accepted FTA chapters as possible by 2008."

In order to address leaders' concern and implement leaders' instruction in 2005 APEC leaders' declaration, APEC has carried out significant work to pursue high quality of FTAs. In the 2008 annual report of the Committee on Trade and Investment (CTI) to the Ministers, CTI proposed 15 RTAs/FTAs Model Measures, including environmental

measures. Detailed APEC environmental Model Measures are as follows.

Table 4.1 APEC Environmental Model Measures Texts

1. Objectives

- promote mutual supportiveness of trade and environment;
- encourage sound environment policies and practices and improve the capacities and capabilities of the Parties, including non-government sectors, to address environmental matters;

2. Principles and Commitments

- reaffirm each Party's sovereign right over its natural resources and reiterate the sovereign right of each of them to set, administer and enforce their own environmental laws, regulations and policies according to their priorities.
- recognize the importance of each Party effectively enforcing its environmental laws and regulations, and that such laws and regulations include fair, equitable and transparent mechanisms of public participation.
- reaffirm the Parties' intention to continue to pursue high levels of environmental protection consistent with their domestic laws, regulations and policies.
- recognize that MEAs to which both Parties are party play an important role globally and domestically in protecting the environment; and that their respective implementation of these agreements is critical to achieving the environmental objectives thereof.
- agree that it is inappropriate to set or use environmental laws, regulations, policies and practices for trade protectionist purposes.
- agree that it is inappropriate to relax, or fail to enforce or administer environment laws and regulations to encourage trade and investment.
- encourage trade of environmental goods and services.
- promote public awareness of each Party's environmental laws, regulations, policies and practices domestically and promote environmental consciousness and education.

3. Cooperation

Sets out a framework to support the Parties' co-operation and capacity building efforts in this area.

- Taking account of national priorities and available human and financial resources, cooperate on mutually agreed environmental issues of common global or domestic concern, through the interaction of government, business sector, educational, research and other non-governmental institutions in each Party.
- include work in the fields of activity determined by the Parties during the negotiating process.
- decide funding of cooperative activities on a case-by-case basis.
- invite the participation of each Party's non-governmental sectors and other organizations in identifying potential areas for cooperation and in undertaking cooperative activities as mutually agreed.
- encourage and facilitate, as appropriate, the following activities:
 - o support for joint programs and environmental technological and practical demonstrations, including projects, research studies and reports;
 - o exchange of professionals, technicians and specialists;
 - o facilitation of linkages among representatives from, inter alia, government, academia, and business sector;
 - o organization of joint conferences, seminars, workshops, meetings, training sessions, and outreach and educational programs;
 - o exchange of technical information, publications and regulations;

-
- o exchange of information and consultation on national environmental programs;
 - o sharing approaches and experiences with respect to environmental institutions, regulations and enforcement;
 - o enhance cooperation on raising public awareness of environmental conservation and participation in environmental protection; and
 - o any other modes of cooperation agreed upon by the Parties.
- evaluate the effectiveness of cooperative activities prior to determining future cooperation.

4. Institutional Arrangements:

Sets out the institutional framework to facilitate implementation of the Environment Chapter

- designate a Contact Point and/or an Environment Committee to facilitate communications on matters arising under the Environment chapter, which should:
 - o meet and communicate on a regular basis as mutually agreed.
 - o be responsible for: co-ordinating the implementation of the Environment Chapter; serving as a forum for dialogue on environment-related matters of mutual interest; considering areas of potential cooperative activities; monitoring the progress of work programs and other joint activities.
 - o as appropriate, report to the appropriate body of the RTA/FTA each time the appropriate body meets. [This suggestion depends upon the institutional model adopted]
- consult with members of its public and/or non-governmental sectors on matters relating to the operation of this Chapter, where necessary.
- develop mechanisms, where necessary, to inform its public of activities undertaken pursuant to this Chapter in accordance with its laws, regulations, policies and practices.

5. Consultations

- with all possible means endeavor to agree on the interpretation and application of the Environment Chapter.
- endeavor to resolve, amicably and in good faith, through dialogue, consultation and cooperation, any issue that might arise between the Parties concerning the application and implementation of the Chapter.

Source: 2008 Annual Report to Ministers, CTI, APEC.

As an important outcome in 2008, environmental Model Measures Texts have been endorsed by APEC's trade ministers in CTI meeting in late May. This Model Measures Texts have 5 sections, covering Objectives, Principles and Commitments, Cooperation, Institutional Arrangements and Consultations.

The APEC Environmental Model Measures Texts have provided member economies with reference for FTAs/RTAs negotiations and ensured the conformity of environmental rules in the APEC region.

4.2 Development of Environmental Provisions in APEC Members' FTAs/RTAs

(1) General observations on environmental provisions

According to WTO FTA/RTA database, it finds that the environmental provisions in APEC FTAs/RTAs share general characteristics of high proportion, wide distribution and rapid increase. Specifically, among 112 FTAs/RTAs in APEC, 96 FTAs/RTAs have included or conceived environmental provisions. In addition, all APEC economies (100%) signed at least one FTA/RTA containing environmental provisions, and 16 economies, which accounts for 76%, signed at least one FTA/RTA with an environmental chapter. What's more, the number of FTAs/RTAs with environmental provisions signed by APEC member economies increased rapidly over past decades. The Number of FTAs/RTAs conceiving environmental provisions in APEC is around 10 in 1990s, and it increased to more than 90 in 2015.

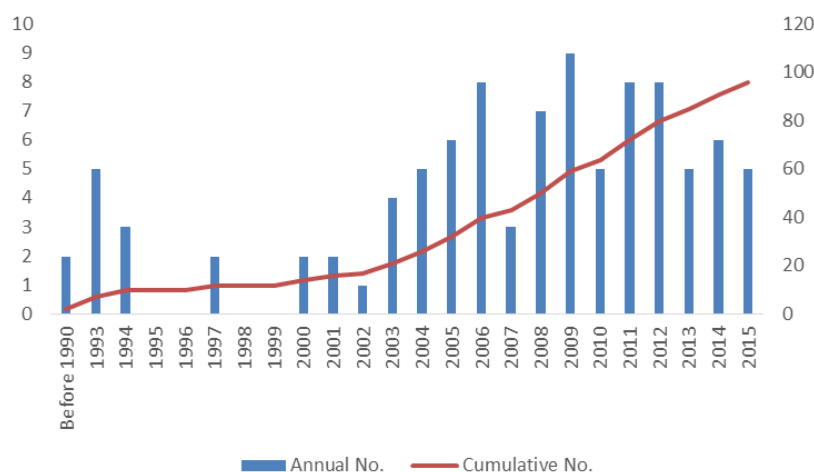


Figure 4.1 The number of FTAs/RTAs with environmental provisions in APEC

(2) Main contents of environmental provisions in FTAs/RTAs in APEC

The environmental provisions are extensively involved in APEC member economies' FTAs/RTAs.

In body text, environmental provisions are presented in the forms of exceptions,

preamble, investment, TBT/SPS, technical cooperation, government procurement, market access of ES, environmental chapter, dispute settlement, environmental articles in trade penalization, etc.

Besides, another important form of environmental provisions in FTAs is environmental chapter, including definition and scope, level of protection, effective enforcement of environmental laws, regulations and measures, institutional arrangements, procedural arrangements, transparency, environmental cooperation, dispute settlement, multilateral environmental agreements, environmental impact assessment, financial arrangements.

(3) Comparing with APEC 2008 environmental model measure

Environmental Model Measures Texts formulated by APEC in 2008 provide reference for APEC member economies negotiating on RTAs/FTAs, and promoting the conformity of environmental rules of RTAs/FTAs in APEC area. By analyzing APEC member economies' practices (See Table 4.2) on setting up environmental rules in FTAs after the formulation of environmental Model Measures Texts, it can be found that these texts have great influence on the environmental rules under regional trade framework.

From the perspective of quantity, most of the APEC members have been influenced by APEC when setting up environmental rules. Firstly, most FTAs with environmental chapters are signed by APEC members. According to statistics, APEC members involve in 87% of 38 signed FTAs with environmental chapter. Secondly, among 21 APEC members, 17 have participated in at least one FTA with environmental chapter (excluding Indonesia; the Philippines; etc.). It can be seen that APEC members come to a basic consensus on including environmental chapters in the FTAs. Finally, half of the APEC members-involved FTAs with environmental chapters are signed between APEC members.

From the perspective of time, environmental rules under trade framework of most APEC members are set up after the APEC Model Measures Texts. Excluding 8 early FTAs with environmental chapters signed by the USA were earlier than 2008 APEC Model Measures Texts; all the other APEC members signed FTAs with environmental chapters after that Texts. From the rule-making side, APEC members are influenced by APEC when negotiating on the FTAs.

The content of environmental chapters in FTAs signed by APEC members are remarkably consistent with the content in APEC environmental Model Measures Texts. Through comparative analysis (See Table 4.2), we can see that major elements in model texts are reflected in the environmental chapters in FTAs signed by APEC members. Most of the articles in model texts excluding “promote public awareness” appear on over half of the samples, especially “cooperation” and “institutional arrangements”, existing in all 24 documents with environmental chapters signed by APEC members. In addition, besides the coverage of model texts, environmental chapters in FTAs signed by APEC members plus or minus according to the actual environmental needs of contracting parties. For instance, China-Republic of Korea FTA included articles relating to environmental impact assessment of trade, TPP involved in biodiversity conservation, ozone layer protection, mechanism of voluntary environmental performance, etc., Republic of Korea-EU FTA contained articles of sustainable impact assessment, etc.

Table 4.2 Comparing APEC environmental model measures with environmental chapter in APEC member economies' FTAs/RTAs

APEC Environmental Model Measure	Environmental chapter in APEC member economies' FTAs/RTAs																								Percentage %
	US						CDA						EU			KR				PR		CT	HKC		
	OM	P E	CL	KR	PN	TPP	PE	CL	JD	PN	HD	KR	PNG and Fiji	KR	CP	PE	TK	AUS	NZ	SW	KR	NZ	EFTA	CHL	
Objectives		✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	79
Principles and Commitments	○	○	○	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	●	○	○	○	○	○	-
-Right to regulate*	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓	88
-Implementation and PP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓				✓						63
-Level of environmental protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	92
-MEAs		✓	✓	✓	✓	✓					✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71
-Trade protectionism						✓					✓			✓			✓	✓	✓	✓	✓	✓		✓	42
-Non-derogation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	96
-Promoting trade in EGS**					✓	✓					✓			✓	✓	✓		✓	✓	✓	✓	✓	✓		50
-Public awareness											✓								✓		✓		✓		17
Cooperation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100
Institutional arrangement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100
Consultation	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	75

Note: US: United States, OM: Oman, PE: Peru, CL: Columbia, JD: Jordan, HD: Honduras, CDA: Canada, PNG and Fiji: Papua New Guinea and Fiji, CP: Columbia and Peru, TK: Turkey, AUS: Australia, NZ: New Zealand, PRC: People's Republic of China, SW: Switzerland, CT: Chinese Taipei, HKC: Hong Kong, China, CHL: Chile, PP: Public Participation

✓ denotes "contained in FTA"; Regarding Principles and Commitments, ddenotes "partly covered", ● denotes "all covered".

* US FTAs do not include or explicitly recognize a "right to regulate"

** USTR stated that all US FTAs promote trade in EGS, however, we merely aim at EGS provisions in environmental chapters of FTAs in this report.

(4) Characteristics

Overall, there exist big differences between FTAs/RTAs of developed and developing economies in terms of environmental provisions; FTAs/RTAs signed between developing economies contain fewer environmental provisions, especially the independent environmental chapters.

However, Chile is an exception, which included environmental provisions in most of its FTAs/RTAs. In general, FTAs/RTAs containing environmental provisions are mostly signed by the US, European Union and Korea. The environmental chapters in these FTAs/RTAs contain the largest number of environmental provisions. (see Figure 4.2)

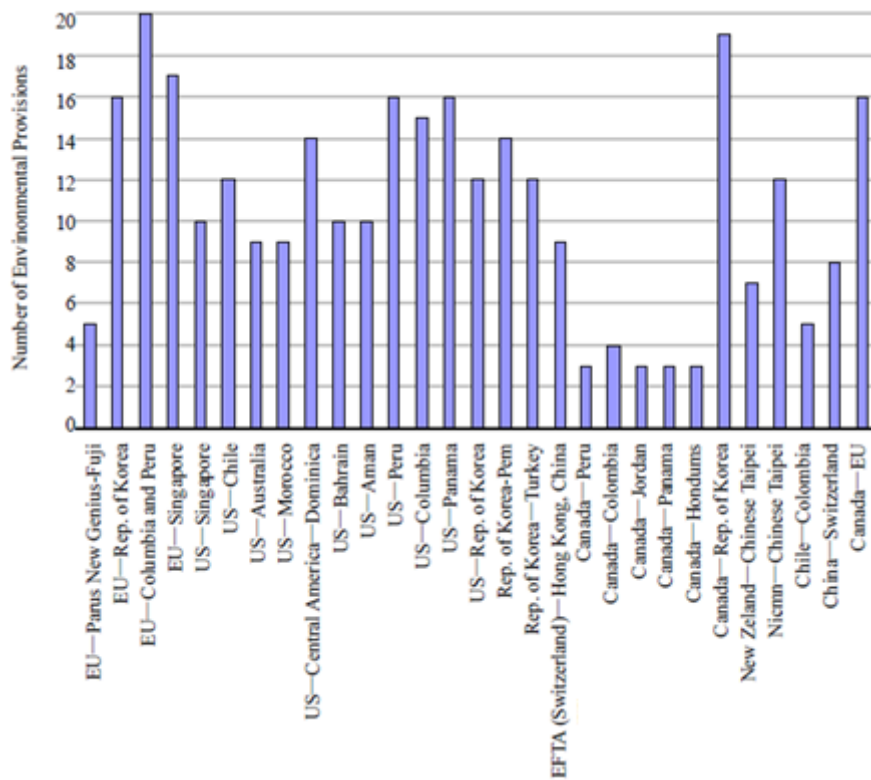


Figure 4.2 Numbers of environmental provisions in environmental chapter of APEC members' FTAs/RTAs

4.3 Typical Environmental Provisions in APEC Members' FTAs/RTAs

(1) Cooperation on trade in EGS

APEC formulated EGS trade related rules in environmental Model Measures Texts and solidified the outcomes, which were then consolidated at bilateral areas by APEC members, through “axle-and-spoke” effect, and further influencing the EGS cooperation rule-making at regional level.

Although APEC formulated EGS trade related rules in environmental Model Measures Texts, APEC members don’t completely follow APEC forms when setting up EGS cooperation rules at regional level.

In practice, some members classify articles of EGS cooperation into “cooperation” articles, such as Japan-Mexico FTA. Some put EGS cooperation into side agreements on the environment, such as CAFTA-DR. But more members put EGS cooperation into environmental chapters, therefore, EGS cooperation articles in environmental chapters in FTAs signed by APEC members are focused in this chapter.

It can be seen that the influence of APEC on EGS cooperation rule-making at regional level is mainly driven by developed economies like the USA; Canada; Republic of Korea; etc. Most environmental chapters in the FTAs signed by these members include EGS cooperation, and hence these members are regarded as the major driving force for APEC promoting EGS cooperation rule-making.

Among 33 FTAs with environmental chapters with involvement of APEC members, 13 environmental chapters include EGS cooperation articles (other chapters not considered), and most of which were signed after the APEC environmental Model Measures Texts. Thus, influenced by APEC EGS cooperation, new FTAs with environmental chapters signed by APEC members have the trend to include EGS cooperation articles, and EGS articles stand a good chance to be the fixed provisions in the environmental chapters in the future.

Main content of EGS articles is improving liberalization of EGS through cooperation between contracting parties, and thus supporting sustainable development and green development, which is in consistent with the APEC's idea and EGS cooperation articles in APEC Environmental Model Measures Texts. According to the statistics, APEC's rules on EGS cooperation have gradually become environmental rules under bilateral and multilateral trade frameworks through "axle-and-spoke" effect by members.

(2) Consultation

Whereas FTAs and RTAs contribute greatly to trade and sustainable development, APEC drafted a Model FTAs/RTAs for the reference of members. In the trade and environment chapter of APEC, one member submitted the following proposal for environmental dispute settlement:

1. Consultation: Consultation shall commence promptly at the written request of a party according to Art.5.
2. Panel: If Parties fail to reach a mutually satisfactory resolution by consultation, the dispute may be submitted to Environment Roster or Panel of Experts. The appointment of environmental experts shall be based on agreements by all parties. Besides, experts shall have professional knowledge and rule in the case in their individual capacity.

"Mutually satisfactory resolution" sounds like a very high standard, but actually it would not make a big difference if the wording was changed to "resolution mutually acceptable". Since consultation is conducted only between the complaining party and responding party, each of them may have a 'veto' to the resolution if they find it not satisfactory or acceptable. Meanwhile, either party cannot stop the other party to request a panel to be established even if it rejected the result of consultation.

Compared with the dispute settlement mechanism of US FTAs, the dispute settlement proposed by the APEC Model is weaker, which reflected in that panel report is only a recommendation with no provisions involving its implementation.

4.4 APEC member economies comments

China held a seminar on Environmental Provisions in FTAs/RTAs on September 12, 2017 in order to:

a. help APEC member economies to strengthen capacity building on understanding and negotiating of environmental provisions in FTAs/RTAs, and enhance the capacity of designing environmental provisions under FTAs/RTAs framework to get mutual supportiveness between environment and trade;

b. increase knowledge of negotiators, policymakers, and regulators on environmental provisions in existing FTAs/RTAs of APEC members and enhance the capacities of FTA negotiators as well as policy makers in the field of trade, environment, finance, planning, etc.;

c. address the issues on environmental provisions in FTAs/RTAs through analyzing the divergence and convergence among existing FTAs/RTAs and discussing how to promote realization of Sustainable Development Goals (SDGs) through negotiation on environmental provisions.

The seminar attracted much attention from APEC economies and international organizations dedicating in the research in trade and environment area. Around 30 participants from member economies, international organizations, research institutes and academia attended this seminar.

The seminar mainly focused on three topics, they are: Overall Situation of Environmental Provisions in FTAs/RTAs; Rule Issues of Environmental Provisions in FTAs/RTAs; and Assessing Environmental Impact of Trade or Trade Agreement.

From the results of the seminar evaluation, we can see that the seminar was well

received by the participants and the goals of the seminar were successfully achieved. Detailed information of the evaluation please refer to table 1. Some feedback from several economies including Malaysia and Singapore said that this seminar was useful in providing interdisciplinary insight and experience from all experts and they have better perspective when developing policies and recommending suggestions on environmental provisions in trade agreements.

In addition, some participants provided suggestions on improving the project through:

- *Extending the workshop to 2 or 3 days, enabling more detailed discussion;*
- *Being more outreach for general public;*
- *Inviting representatives from the private sectors;*
- *Adding more sessions for discussing and sharing good examples.*

Main outcomes of the seminar include:

Establishing platform and promoting mutual understanding

The seminar of Environmental Provisions in FTAs/RTAs has established a platform for policy dialogue and exchange of information between international experts and APEC economies, government-academia-researcher, inter-economies, etc. promoting economies' understanding and awareness of environmental provisions in trade agreements. Experts and representatives of economies shared policy information and experience in implementation on environmental provisions in trade agreements, identified the trend of the environmental provisions under FTA framework in APEC area, and improving the mutual understanding on FTAAP. All the delegates reached a consensus on the significance of including environmental provisions in trade agreements and further research on the related issues.

Expanding the influence and deepening cooperation

The seminar has expanded the influence of PRCEE, China, and APEC in the international environmental and trade investment area. During the seminar, expert of OECD offered invitation orally to Chinese experts for joining the seminar on environment and trade issue in Chile in 2018. What's more, IGES has also put forward their expectations for future cooperation with China in environment and trade investment area, and the possibility to include environment and trade investment issue as an important area into the China-Japan-Republic of Korea cooperation framework.

Enhancing capacity and solving the problem

The seminar has enhanced the capacity of negotiators of economies for trade agreements, decision makers, regulators and other stakeholders in trade, environment, finance, planning, etc. providing support for meeting challenges in environmental provisions negotiations under FTAs/RTAs. Representative from Thailand pointed out that she planned to organize knowledge sharing forum with colleagues and analyze related provisions of multilateral environmental agreements (MEAs) and trade rules in order to provide recommendation to policy level.

5. Case study on the Environmental Provisions in APEC Members' FTAs/RTAs

5.1 United States

There has been more than 30 years of history in discussing and setting environmental issues under the framework of FTAs. The US is also the first to add environmental provisions or subsidiary agreements to the FTAs. In 1992, the US began trying to set environmental provisions under the framework of NAFTA, and signed NAAEC as a parallel agreement. Since then, the FTAs signed by the US all include environmental chapters with enforceable obligations, and have been accompanied by environmental impact assessments. Environmental provisions in U.S. FTAs are primarily found in substantive Environment chapters, with additional related provisions included in the preamble, public procurement provisions, SPS and so on. In addition, the trade agreements of the US are generally accompanied by an Environmental Cooperation Agreement (ECA). According to data released by the USTR, there are 14 FTAs signed and in effect by United States currently. With the exception of the US-Israel FTA, 13 others were set up with an environmental chapter and/or affiliated environmental cooperation agreements.

The trade agreements of the US containing environmental provisions are characterized by the establishment of independent environmental chapters with rich content. In particular, the chapters contain binding provisions subject to dispute settlement mechanisms.

5.2 Canada

By the end of 2013, Canada had implemented 10 FTAs: Canada-Panama FTA (April 1, 2013), Canada-Jordan FTA (October 1, 2012), Canada-Colombia FTA (August 15, 2011), Canada-Peru FTA (August 1, 2009), Canada-European Free Trade Association (July 1, 2009), Canada-Costa Rica FTA (November 1, 2002), Canada-Chile FTA (July 5, 1997), Canada-Israel FTA (January 1, 1997), North American FTA (January 1, 1994)

and Canada-the United States FTA (January 1, 1989). Canada is also involved at various stages of negotiation, implementation and entry into force of FTAs with partners, such as the Dominican Republic, Singapore, and Ukraine. In trade agreements and policies, one of the important policy objectives of Canada is to ensure the mutual support and promotion of trade and environmental protection. To this end, Global Affairs Canada and Environment and Climate Change Canada seek to incorporate environmental considerations and obligations into FTAs.

FTAs negotiated between Canada and their partners which have come into effect since the implementation of the Canada-Peru FTA in 2009 all include an independent chapter under the title of “Environment”. In addition, FTAs before Canada-Korea also included a parallel environment agreement. In addition, environment provisions in some cases are included in other chapters, for example the definitions chapter or investment chapter. The framework and content of the environment chapters and/or parallel agreements are generally very similar. Canadian Environment Chapters and/or parallel agreements include provisions whose goal is to pursue high levels of environmental protection, ensure effective enforcement of environmental laws in the partners’ respective territories, not relaxing or lowering environmental laws to encourage trade or investment, ensuring domestic procedures and remedies are in place to address violations of environmental laws, and promoting public participation and transparency. Institutional mechanisms, including committees to oversee the implementation of environmental provisions, contact point to coordinate, accountability mechanisms and dispute settlement mechanisms are also commonly included in FTAs negotiated by Canada. There are also, in most FTAs negotiated by Canada, clauses on cooperation on environmental issues of common concern.

Canada attaches great importance to the environmental assessment of FTAs. Canada formulated the environmental assessment framework for trade negotiations in 2001. For each FTA, the environmental assessment is to follow three stages: initial stage, draft

and final evaluation stages. In the whole process of environmental evaluation, it attaches great importance to the consultation with and participation of the public and stakeholders.

Canada placed great emphasis on environment and sustainable development from an early date. In 1971, Canada established the Ministry of Environment which was responsible for the coordination of environmental policy program and protection and improvement of the natural environment and renewable energy. Overall, the Global Affairs Canada and Environment and Climate Change Canada are responsible for negotiation, of FTAs in Canada. The Government of Canada also participates in environment-related multilateral fora, such as are held through the World Trade Organization (WTO) and the Organization for Economic Co-operation and Development (OECD).

5.3 Republic of Korea

To the end of 2013, Republic of Korea had implemented 9 FTAs. They are: Republic of Korea-ASEAN FTA (January 1, 2010), Republic of Korea-EFTAs FTA (September 1, 2006), Republic of Korea-EU FTA (July 1, 2011), Republic of Korea-Chile FTA (April 1, 2004), Republic of Korea-India FTA (January 1, 2010), Republic of Korea-Singapore FTA (March 2, 2006), Republic of Korea-Turkey FTA (May 1, 2013), Republic of Korea-the United States FTA (May 15, 2012), Republic of Korea-Peru FTA (August 1, 2011). Republic of Korea is also negotiating with Australia; Canada; China; GCC; Indonesia; New Zealand; Viet Nam; China-Japan- Republic of Korea FTAs, and RCEP which have not entered into force. In addition, Republic of Korea continues to carry out negotiations and joint research with Israel and Mongolia.

FTAs implemented by Republic of Korea are small in number, but in recent years, Republic of Korea has more actively pursued its free trade strategy. Republic of Korea had signed high standard FTAs covering a wide range of issues with the United States

and the European Union. In particular, including a high-level standard of environmental provisions or environmental chapters with the US and the European Union. Since signing FTAs with the US and the European Union, Republic of Korea insists on including environmental provisions or an environmental chapter in FTAs.

From the perspective of content and level, FTAs signed by the US and the EU cover a wide range, including multilateral environment agreements; “environmental measures” and “environmental standards”; environment technology in the field of environment cooperation, mutual recognition of eco-friendly labeling; implementation and improvement of domestic environmental laws and regulations; sustainable development evaluation on trade; institutional arrangements, including specific committees, contact points and advisory groups; dispute settlement mechanisms, including consultation and expert group settlement mechanism; public participation and public information; information exchange and capacity building; other issues involve biodiversity, climate change and labor. Those are binding involve judicial dispute settlement mechanisms.

5.4 New Zealand

New Zealand has ten FTAs in force: New Zealand-Australia CER (1983), New Zealand-Singapore Closer Economic Partnership (2000), New Zealand-Thailand FTA (2005), the Trans Pacific Strategic Economic Partnership (P4) with Brunei Darussalam, Chile and Singapore (2006). New Zealand-China FTA (2008), ASEAN Australia NZ FTA (AANZFTA) (2009), New Zealand-Malaysia FTA (2009), New Zealand-Hong Kong, China Closer Economic Partnership (2011), New Zealand-Chinese Taipei (New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu on Economic Cooperation (ANZTEC)) (2013), and the New Zealand-Korea FTA (2015).

New Zealand has concluded a number of FTAs which are not yet in force, including

the PACER Plus Agreement (focusing on encouraging sustainable economic development in the Pacific Islands) and a FTA with the Gulf Cooperation Council.

New Zealand is currently negotiating a number of FTAs, including with the Pacific Alliance (Chile, Colombia, Mexico and Peru), and upgrading agreements with China and Singapore. New Zealand is also negotiating the multi-party Regional Comprehensive Economic Partnership (RCEP) and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

New Zealand values high quality and comprehensive FTAs covering a range of trade-related issues, such as: trade in goods, including tariffs, market access, Rules of Origin, customs procedures, trade remedies, sanitary and phytosanitary measures, technical barriers to trade; trade in services, including market access; movement of natural persons; investment; intellectual property; government procurement; competition and consumer policy; consultation and cooperation; institutional and legal matters; and labour and environment.

New Zealanders place a high value on protecting and enhancing the environment. They expect their government to play its part in meeting challenges to sustainable development both at a domestic and global level, including for climate change, ozone depletion, collapsing fishing stocks, and conservation of biodiversity, which require international action. They recognise actions taken in pursuit of domestic and international environment objectives may, legitimately, sometimes have an impact on trade.

The New Zealand government recognises that the relationship between trade and environment policy is complex and important. Trade liberalization and the increased economic activity which comes from it may increase the strain on the environment, while at the same time, increasing the wealth which enables societies to meet their economic needs. The environmental impact of trade is affected by how trade

liberalization and environmental policies are formulated and implemented. When constructed with care, trade agreements can and do provide scope for action to be taken to mitigate any harm that comes from increased economic activity. Incorporating environmental provisions in an FTA is an important part of New Zealand's commitment to sustainable development and a platform for trading partners in international cooperation.

In 2001, the New Zealand government developed a framework for integrating environment issues into FTAs to ensure that the objectives for trade and the environment are mutually supportive and serve the overarching goal of promoting sustainable development. The Framework, which consists of nine principles, provides important instruction for the negotiation of trade and environment provisions in trade agreements, and a guideline on the nature of such provisions.

Box 5.1 Environment and Trade Policy Principles of New Zealand

New Zealand policy in multilateral trade and environment fora, and in bilateral negotiations, is informed and guided by the following principles:

- a) The government is committed to ensuring that its objectives for sustainable development are reflected in all its international negotiations;
- b) The government promotes greater coherence between multilateral environment and trade agreements and greater cooperation between the institutions which service them;
- c) The government is committed to providing a liberal and rules-based trading environment. In all trade and economic agreements it negotiates, it is careful to ensure that the government's ability to regulate as it sees fit for the protection of New Zealand's environment is not compromised or encumbered.
- d) The government believes agreements to advance international environment objectives sometimes need to be reinforced by trade measures. New Zealand works to ensure that the WTO continues to show proper respect for internationally agreed rules for the protection of the environment.
- e) New Zealand wants a sustainable international trading system which maximises the opportunities for all countries to participate in the global economy. To this end New Zealand:

* seeks standards that focus on the environmental objective which is being promoted, rather than seek to prescribe unnecessarily the method by which the objective should be reached;

- * respects the right of other governments to determine their own domestic regulations where these impact only on the environment in their own jurisdictions and do not result in breaches of international rules on either environment or trade;
- * works to eliminate export subsidies and other payments which encourage increased production;
- * opposes the use of environment standards as a form of economic protectionism from lower priced international competition;
- * opposes the use of measures that discriminate between products on the basis of their respective national origins.

(Source: New Zealand Government)

In New Zealand, the Ministry of Foreign Affairs and Trade is responsible for negotiations on trade and investment agreements and coordinating with related government agencies on the various policy elements and provisions within a trade agreement. The main agencies consulted are often: the Ministry of Business, Innovation and Employment, the Ministry for Primary Industries, the New Zealand Treasury, New Zealand Customs, the Ministry for the Environment, and the Ministry of Culture and Heritage. These government officials meet regularly before and after each round of negotiations.

The Ministry for the Environment negotiates environment provisions associated with those agreements and encourages New Zealand's bilateral partners to improve market access for environmental goods and services. New Zealand seeks environmental provisions that are of formal treaty status negotiated and signed within the framework of each free trade agreement. The Ministry for the Environment is the lead agency in New Zealand responsible for implementing the environment agreements with each partner economy.

New Zealand has signed environmental agreements or related arrangements with China; Hong Kong, China; Korea; Malaysia, Philippines, Thailand, as well as Chile, Brunei Darussalam and Singapore (in the P4 Trans-Pacific Strategic Economic Partnership Agreement – the CPTPP's predecessor).

The content of New Zealand's trade and environment agreements vary, but has tended to include obligations to: ensure environmental laws and regulations are implemented and enforced, including in accordance with international obligations; commit to not weaken or resile from environmental laws or regulations to attract trade or investment; commit to not use environmental laws, regulations, policies and practices for protectionist purposes; commit to not use environmental measures to discriminate on products based on their origin; and to raise public awareness.

Table 5.1 FTAs with Environmental Provisions Took into Force by Republic of Korea

Name	Date of signing	Date of effect	Environmental agreement	Environmental chapter	Environmental provision	Specific environmental provisions
Republic of Korea-Chile	1/2/2003	1/4/2004	×	×	√	<p>Preamble Recognizing that this Agreement should be implemented with a view toward raising the standard of living, creating new work opportunities, and promoting sustainable development in a manner consistent with environmental protection and conservation.</p> <p>Chapter 8 Sanitary and Phytosanitary Measure provision 8.2 general provision The Parties shall...to enhance plant and animal health and food safety... provision 8.3 rights of the parties The Parties may, in accordance with the SPS Agreement: (a) adopt, maintain or apply any sanitary or phytosanitary measure whenever it is necessary for the protection of human, animal or plant life or health in their territories in accordance with this...</p> <p>Chapter 10 Investment provision 10.18 environment measures The Parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures. Parties shall consult with a view to avoiding any such encouragement.</p>

Name	Date of signing	Date of effect	Environmental agreement	Environmental chapter	Environmental provision	Specific environmental provisions
Republic of Korea-Singapore	4/8/2005	2/3/2006	×	×	√	Chapter 18 Cooperation areas include “ <i>environment technology</i> ” provision 18.9 environment Desiring to promote closer co-operation between interested organisations and industries of the Parties in the field of CNG technologies and applications to environmental protection, the Parties have concluded a Memorandum of Understanding to facilitate such cooperation.
Republic of Korea-EFTAs	15/12/2005	1/9/2006	×	×	√	Preamble Recognising that trade liberalisation should allow for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment
	24/8/2006 (goods)	1/1/ 2010 (goods)				Article 3.1 Scope and Implementation of Cooperation The Parties, on the basis of mutual benefits, shall explore and undertake cooperation projects in the following areas: (k) environmental industry
	21/11/2008 (services)	1/5/ 2009 (ser vices)	×	×	√	Article 11 Environmental Industry 1. The Parties, recognizing that economic development, social progress and environmental protection are key pillars of sustainable development, shall explore ways to promote closer cooperation among their respective interested government entities, industries, organisations and research institutions.

Name	Date of signing	Date of effect	Environmental agreement	Environmental chapter	Environmental provision	Specific environmental provisions
						2. To this end, the Parties shall pursue the following environmental cooperation activities on a mutually agreed basis: (a) cooperation in environmental technologies and policies, such as compressed natural gas technology and policy; (b) cooperation in environmental capacity building of industries and exchanges of information and experiences of environmental industries; (c) cooperation in exchanges and education of human resources related to the environment; and (d) other forms of environmental cooperation as mutually agreed.
Republic of Korea-US (KORUS)	30/6/2007	15/3/2012	√	√	√	Preamble Desiring to strengthen the development and enforcement of labour and environmental laws and policies, promote basic workers' rights and sustainable development, and implement this Agreement in a manner consistent with environmental protection and conservation; Chapter 22 Environment KORUS Environmental Cooperation Agreement
Republic of Korea-India	7/8/2009	1/1/2010	×	×	√	Preamble Recognising that economic and trade liberalisation should allow for the optimal use of natural resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment.

Name	Date of signing	Date of effect	Environmental agreement	Environmental chapter	Environmental provision	Specific environmental provisions
Republic of Korea-EU	6/10/2010	1/7/2011	×	√	√	<p>Preamble</p> <p>Reaffirming their commitment to sustainable development and convinced of the contribution of international trade to sustainable development in its economic, social and environmental dimensions, including economic development, poverty reduction, full and productive employment and decent work for all as well as the protection and preservation of the environment and natural resources;</p> <p>Desiring to strengthen the development and enforcement of labour and environmental laws and policies, promote basic workers' rights and sustainable development and implement this Agreement in a manner consistent with these objectives;</p> <p>Chapter 1 Objectives and General Definitions</p> <p>To promote foreign direct investment without lowering or reducing environmental, labour or occupational health and safety standards in the application and enforcement of environmental and labour laws of the Parties.</p> <p>Chapter 13 Trade and Sustainable Development (See Annex 1)</p>
Republic of Korea-Peru	21/3/2011	1/8/2011	×	√	√	<p>Preamble</p> <p>Recognizing that this agreement should be implemented with a view toward raising the standard of living, creating new work opportunities, and promoting sustainable development in a manner consistent with environmental protection and conservation;</p> <p>Article 10.18: Environmental Measures</p>

Name	Date of signing	Date of effect	Environmental agreement	Environmental chapter	Environmental provision	Specific environmental provisions
						The Parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures. Chapter 19 Environment (See Annex 3)
Republic of Korea-Turkey	30/4/2013	1/5/2013	×	√	√	None

Source : the author collected and organized data from the WTO website.

5.5 Japan

By March 2014, Japan has signed 13 FTAs. But Japan rarely named the trade agreements as FTAs, instead Japan signed an Economic Partnership Agreement. They are: Japan-Singapore (November 30, 2002), Japan-Mexico (April 1, 2005), Japan-Malaysia (July 13, 2006), Japan-Chile (September 3, 2007), Japan-Thailand (November 1, 2007), Japan-Indonesia (July 1, 2008), Japan-Brunei Darussalam (July 31, 2008), Japan-ASEAN (December 11, 2008), Japan-Philippines (December 11, 2008), Japan-Switzerland (September 1, 2009), Japan-Viet Nam (October 1, 2009), Japan-India (August 1, 2011) and Japan-Peru (March 1, 2012). In addition to negotiations with Mongolia, Republic of Korea and Australia in bilateral FTA there are negotiations on the trans-Pacific partnership agreement as well as joint research with Turkey, it could be said that Japan is in a period of rapid development of FTAs.

So far, FTAs signed by Japan do not have independent environmental chapters or subsidiary agreements relating to environmental issues. Provisions dealing with environmental issues are also very rare, related content only exist in the preamble or other provisions, such as in the Japan-Chile strategy economic partners agreement, Japan-Brunei Darussalam economic partners agreement; general exception provisions, such as Article 68 of Japan-Thailand economic partners agreement, Japan-Philippines economic partners agreement; environmental measures, such as Article 87 of Japan-Chile strategy economic partners agreement , Article 71 of Japan-Brunei Darussalam economic partners agreement; principles, such as Article 134 of Japan-Indonesia economic partners agreement; Article 144 of Japan-Philippines economic partners agreement; cooperation provisions, such as Japan-Thailand economic partnership agreement; Japan-Brunei Darussalam economic partnership agreement; and environmental provisions, such as Article 102 of Japan-Indonesia economic partnership agreement. FTAs with environmental provisions which took effect are shown in Table 5.2.

Table 5.2 FTAs with environmental provisions took into force by Japan

Name	Date of effect	Environmental provisions			
		Preamble	Side agreement	Chapter	Special provisions
Japan-Singapore	30/11/2002	×	×	×	• immunity right (mutual recognition)
Japan-Mexico	1/4/2005	×	×	×	• Investment • Investment dispute settlement • Environmental cooperation • Public opinion procedure
Japan-Malaysia	13/7/2006	×	×	×	• Investment • Environmental cooperation
Japan-Chile	3/9/2007	✓	× Joint statement	×	• Investment • Investment dispute settlement
Japan-Thailand	1/11/2007	×	×	×	• Immunity right (mutual recognition) • Investment • Environmental cooperation
Japan-Indonesia	1/7/2008	×	×	×	• Investment • Energy and mineral resource (environmental perspective) • Environmental cooperation
Japan-Brunei Darussalam	31/7/2008	✓	×	×	• Investment • Energy • Environmental cooperation
Japan-ASEAN	11/12/2008	×	×	×	• Immunity right (standard) • Environmental cooperation
Japan-Philippine	11/12/2008	×	×	×	• Environmental standard integration • Immunity right (mutual recognition) • Investment • Environmental cooperation
Japan-Switzerland	1/9/2009	✓	×	×	• Environmental goods • Investment • Patent
Japan-Viet Nam	1/10/2009	×	×	×	• Immunity right (standard) • Environmental cooperation
Japan-India	1/8/2011	✓	×	×	• Level of protection • Environmental law

Name	Date of effect	Environmental provisions			
		Preamble	Side agreement	Chapter	Special provisions
					enforcement • State-to-state relation • Investment • Environmental cooperation
Japan-Peru	1/3/2012	√	× Joint statement	×	• Immunity right • Notice (technology management regulation) • Government procurement • Environmental cooperation

Source: Akiko YANAI, Environmental provisions in Japanese regional trade agreements with developing economies, IDE DISCUSSION PAPER, No. 467, 2014.

The environmental provisions of Japan in trade facilitation agreement are characterized by an emphasis on environmental cooperation in the agreement, most of the trade facilitation agreements of Japan include environmental cooperation terms. The provisions put more emphasis on the importance of environmental protection and sustainable development, pointing out that we cannot sacrifice environment in order to develop trade. In 2011, there are “environmental protection” provisions in the “General” of the Japan-India trade agreement, which was the first time that Japan added such provisions to regional trade agreements, and environmental issues began to be regarded as important areas for cooperation. The Japan-Peru trade agreement launched in 2012 is a major step towards substantive environmental provisions, including in two specific and detailed joint statements about environmental cooperation. One is on trade and environment, the other one is on biodiversity and access to genetic resources and traditional knowledge and recognizing the importance of the international conventions in this area. Environmental issues received unprecedented attention. Additionally, there are provisions related to standards, conformity assessment, technology management in other chapters that may contain requirements for taking appropriate measures to protect environment, such as the Japan-Southeast Asia economic partnership agreement.

In addition, the Ministry of Environment of Japan has released a policy statement

“relating to the coordination of environment and trade policy” in accordance with recommendations of an expert group on global environmental issues in 1995. The statement pointed out that Japan should make a positive contribution to environmental protection in Asia-Pacific region, while avoiding adverse impacts of economic cooperation and development investments on environment.

Japan has officially joined the Trans-Pacific Strategic Economic Partnership negotiations and an independent environmental chapter is included. Therefore, Japan may pay much more attention to environmental chapters in the future. Research institutes in Japan also suggest that Japan should pay attention to Environmental Impact Assessment (EIA) of trade agreements.

6. Recommendations

Based on the preceding analysis of the status and development of environmental provisions in FTAs/RTAs in APEC and the seminar, the following recommendations were made by the authors of this study according to their research, survey, as well as face-to-face discussion in the seminar.

Capacity building

Many participants emphasized that capacity building is very important for better understanding the relationships between trade and the environment. In order to improve the capacities, further discussion should be focused on different types of provisions under the framework of domestic environmental laws and MEAs, including how to balance members' interests in environmental provisions negotiations, how to increase effectiveness of enforcement of environmental provisions in FTAs, how to conduct environmental impact assessment of trade agreements, etc. Main forms include dialogues among economies, experts, stakeholders, etc.

Basic joint research

APEC economies should promote basic joint research on environmental provisions in FTAs, market access of environmental services, liberalization of environmental goods, etc. Based on the outcomes of the research, APEC should also establish basic database for environment and trade, with timely updates and hence realizing resource sharing and information exchange.

Communication with stakeholders

APEC economies should promote the dialogues between policy-makers, negotiators and industries, stakeholders, further improving and strengthening the public-private dialogue mechanism of APEC on environment and trade issue.

References

- [1] Abaza, Hussein, Jha, et al. Integrated Assessment of Trade Liberalization and Trade-Related Policies UNEP Country Project-Round II A Synthesis Report[M]. UNEP. 2002.
- [2] Akiko YANAI, Environmental provisions in Japanese regional trade agreements with developing countries, IDE DISCUSSION PAPER, No.467, 2014.
- [3] Alberto Ansuategi, Marta Escapa. Economic growth and greenhouse gas emissions[J]. *Ecological Economics*, 2002, 40 (1) : 23-37.
- [4] Ariaster B Chimeli, John B Braden. Total Factor Productivity and the Environmental Kuznets curve[J]. *Journal of Environmental Economics and Management*, 2005, 49 (2) : 366-380.
- [5] Brantley Liddle, Free trade and the environment-development system[J]. *Ecological Economics*, 2001, 39: 21-36.
- [6] CEC. About the CEC[DB/OL]. http://www.cec.org/Page.asp?PageID=1226&SiteNodeID=310&BL_ExpandID=878. 2015-1-5.
- [7] CEC. North American Agreement On Environmental Cooperation[DB/OL]. <http://www.cec.org/Page.asp?PageID=1226&SiteNodeID=567>. 2015-1-5.
- [8] Dale Colyer. Green Trade Agreements[M]. Croydon: CPI Group, 2011.
- [9] Ebbesson, Jonas. Environmental Assessment of the OECD Multilateral Agreement on Investment[A]. *Environmental Assessment of Trade Agreements and Policy*[C]. Copenhagen: Nordic Council of Ministers. 1998, 63-73.
- [10] EPA. About the Office of Environmental Information[DB/OL]. <http://www2.epa.gov/aboutepa/about-office-environmental-information-oei>. 2015-1-5.
- [11] EPA. EPA Organization Chart[DB/OL]. <http://www2.epa.gov/aboutepa/epa-organization-chart>. 2015-1-5.
- [12] Fauchald, Ole Kristian. General Introduction: Environmental Assessment of Trade Agreements and Policy[A]. *Environmental Assessment of Trade Agreements and Policy*[C]. Copenhagen Nordic Council of Ministers. 1998. 11-17.
- [13] Gary C Hufbauer, Daniel C Esty, Diana Orejas, et al. Schott. NAFTA and the Environment: Seven Years Later. INSTITUTE FOR INTERNATIONAL ECONOMICS.
- [14] Grossman G M, Krueger A B. Environmental impacts of a North American Free Trade Agreement. In: Garber P M (Ed.), *The U.S.-Mexico Free Trade Agreement*[M]. MIT Press, Cambridge, USA, 1993.
- [15] Henrik Horn. The burden of proof in trade disputes and the environment[J]. *Journal of Environmental Economics and Management*. 2011, 62: 15-29.
- [16] IISD, UNEP. Environment and Trade a handbook (M) . Canada, 2005.
- [17] Jintai Lina, Da Pana, etc. China's international trade and air pollution in the United States[J]. *PNAS Early Edition*, 2014.
- [18] Larry Karp. The Environment and Trade[J]. *The Annual Review of Resource Economics*. 2011. 3: 397-417.
- [19] Matthew A Cole. Trade, the Pollution Haven Hypothesis and the Environmental Kuznets Curve: Examining the Linkages[J]. *Ecological Economics*, 2004, 48 (1) : 71-81.
- [20] OECD. Environmental and Regional Trade Agreements 2007[M]. OECD publishing.
- [21] OECD. Environmental and Regional Trade Agreements 2008[M]. OECD publishing.
- [22] OECD. Environmental and Regional Trade Agreements 2009[M]. OECD publishing.
- [23] OECD. Environmental and Regional Trade Agreements 2010[M]. OECD publishing.
- [24] OECD. Environmental and Regional Trade Agreements 2011[M]. OECD publishing.
- [25] OECD. Environmental and Regional Trade Agreements 2012[M]. OECD publishing.
- [26] Richard York, Eugene A Rosa, Thomas Dietz. STIRPAT, IPAT and ImPACT: analytic tools for unpacking the driving forces of environmental impacts[J]. *Ecological Economics*, 2003, 46 (3) , 351-365.
- [27] Soumyananda Dinda. A theoretical basis for the environmental Kuznets curve[J]. *Ecological Economics*, 2005, 53 (3) : 403-413.
- [28] Tae Hyeong Kwon. Decomposition of Factors Determining the Trend of CO₂ Emissions From Car Travel in Great Britain (1970-2000) [J]. *Ecological Economics*, 2005, 53 (2) : 261-275.
- [29] Tarasofsky, Richard. Report on the Workshop Methodologies for Environmental Assessment of Trade Liberalisation Agreement[A]. *Assessing the Environmental Effects of Trade Liberalisation Agreements Methodologies*[C]. OECD. 2000. 11-18.
- [30] UN. TRADE AND ENVIRONMENT REVIEW[M]. New York and Geneva, 2006.

- [31] UNEP. Trade liberalization and the Environment Lessons learned from Bangladesh, Chile, India Philippines, Romania and Uganda A Synthesis Report[M]. 1999.
- [32] USTR. CAFTA-DR (Dominican Republic-Central America FTA) [DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/cafta-dr-dominican-republic-central-america-fta>. 2015-1-5.
- [33] USTR. Chile Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/chile-fta>. 2015-1-5.
- [34] USTR. Free Trade Agreements Australia[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/australian-fta>. 2015-1-5.
- [35] USTR. Free Trade Agreements Bahrain[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/bahrain-fta>. 2015-1-5.
- [36] USTR. Israel Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/israel-fta>. 2015-1-5.
- [37] USTR. Jordan Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/jordan-fta>. 2015-1-5.
- [38] USTR. Morocco Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/morocco-fta>. 2015-1-5.
- [39] USTR. North American Free Trade Agreement (NAFTA) [DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/north-american-free-trade-agreement-nafta>. 2015-1-5.
- [40] USTR. Oman Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/oman-fta>. 2015-1-5.
- [41] USTR. Peru Trade Promotion Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/peru-tpa>. 2015-1-5.
- [42] USTR. Singapore FTA[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/singapore-fta>. 2015-1-5.
- [43] USTR. Transatlantic Trade and Investment Partnership (T-TIP) [DB/OL]. <http://www.ustr.gov/ttip>. 2015-1-5.
- [44] USTR. Trans-Pacific Partnership (TPP) [DB/OL]. <http://www.ustr.gov/tpp>. 2015-1-5.
- [45] USTR. U.S.-Colombia Trade Agreement[DB/OL]. <http://www.ustr.gov/uscolombiatpa>. 2015-1-5.
- [46] USTR. U.S.-Republic of Korea Free Trade Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta>. 2015-1-5.
- [47] USTR. U.S.-Panama Trade Promotion Agreement[DB/OL]. <http://www.ustr.gov/trade-agreements/free-trade-agreements/panama-tpa>. 2015-1-5.
- [48] WTO. List of all RTAs[DB/OL]. <http://rtais.wto.org/UI/PublicAllRTAList.aspx>. December 19, 2014.
- [49] Yohei Harashima. Trade and environment negotiations in the WTO: Asian perspectives[J]. Int Environ Agreements. 2008, (8) : 17-34.