



**Asia-Pacific
Economic Cooperation**

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

Survey of Regulatory Measures in Environmental Services

APEC Policy Support Unit
November 2016

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Produced for:

Asia-Pacific Economic Cooperation

Committee on Trade and Investment

APEC#216-SE-01.15



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The views expressed in this paper are those of the authors and do not necessarily represent those of APEC Member Economies.

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EXECUTIVE SUMMARY

By their nature environmental services - sewerage treatment, waste collection treatment and disposal, sanitation, remediation services – entail environmental, public health and public policy dimensions. They are typically provided by public authorities to local communities. In the APEC region they are regulated by multiple agencies across both national (central) and regional, state or municipal (sub central) levels of government. Local government authorities play a major role in their administration. The degree of regulation and the extent of private sector participation vary among economies.

Foreign participation in the market is affected by both ‘general’ restrictions that apply to services and investment across the economy as well as requirements arising from specific regulation of environmental services. Requirements are reflective of the type and degree of regulation in the particular economy. Across the region as a whole, the majority of regulatory measures affecting environmental services are non discriminatory in application and do not directly restrict or prohibit trade and investment. Measures may act as barriers to trade where they impede the ability of foreign providers to participate in the market. Nevertheless, a significant number of trade ‘restrictions’ apply to environmental services delivery in many economies.

Licensing and approval procedures are the predominant controls across the region. This is particularly the case for economies that are more open, but highly regulated. Economies where public authorities assume a greater role in the provision of environmental services tend to maintain a wider array of measures that restrict foreign participation (such as limits on foreign investment and controls on workers). In some of the lesser developed APEC economies, regulation is relatively informal or nonexistent. This is particularly the case for sub central administration of laws and regulations.

Lack of transparency (or the absence) of regulation in some economies also contributes to constraints on foreign operators, even where the market is formally open. This is most evident where a high degree of discretionary decision-making is entrusted to government authorities.

The trend in recent free trade agreements is toward more open regulation of environmental services. While not all economies reviewed have committed to market opening of environmental services in the WTO General Agreement on Trade in Services (GATS), all have improved on WTO liberalisation outcomes in subsequent FTAs (‘GATS +’). This is a result of both formal commitments which expand the liberalisation of environmental services, as well as adherence to obligations which create more open markets (including investment and temporary entry of business persons) and promote the institutionalisation of disciplines that have bearing on the delivery of these services (for example, promote competition, control state owned entities and monopolies, enhance regulatory transparency).

The regulatory picture presented in this study should significantly advance APEC members’ understanding of the regulatory measures impacting on environmental services in the region. It is hoped it will contribute to meaningful discussions on how best to ensure such regulation can facilitate more open trade in future.

1. INTRODUCTION

The task was to compile a detailed inventory of legal and regulatory requirements affecting trade in environmental services across APEC economies. Specifically, the inventory sought to: identify the regulator/s of environmental services in each economy; list the applicable environmental laws and regulations; detail trade and investment and related measures which affect trade in environmental services, and; analyse commitments to liberalise these services in the World Trade Organisation (WTO) and in representative Free Trade Agreements (FTAs).

The inventory was commissioned by the APEC Policy Support Unit in support of the APEC Environmental Services Action Plan. It is intended to present up to date information on the type and nature of regulations impacting on environmental services in the region, to provide greater insights about regulatory and trade promotion policies in environmental services, and to contribute towards discussions on identifying and managing challenges for environmental businesses operating in the region.

This report summarises the outcomes of the review of regulatory measures for environmental services. It includes:

- A summary of the scope and coverage of services and measures in the inventory (Chapter 2);
- An overview of the institutional frameworks; the incidence of regulatory measures and the extent of liberalisation in trade agreements of environmental services identified across APEC economies (Chapter 3);
- Summary outcomes of measures identified in each APEC economy (Chapter 4);
- Conclusions and possible next steps (Chapter 5);
- Supporting Annexes.

Details of the institutional framework and identified measures affecting environmental services in each APEC economy are set out in 'Economy Reports' (attached as excel documents).

2. SCOPE AND COVERAGE

2.1 ENVIRONMENTAL SERVICES

The environmental services examined for the project were confined to those typically provided by public authorities to local communities – sewerage treatment, waste collection, treatment and disposal, sanitation, remediation services - which entail environmental, public health and social policy dimensions. Specifically, services set out in United Nations Central Product Classification Division 94 (CPC94) Version 2.1 were covered. They are summarised in Table 1 below.

Table 1. Environmental services by CPC code

Type of service	Coverage
941 Sewerage, sewage treatment and septic tank cleaning services	Sewerage and sewage treatment services Septic tank emptying and cleaning services
942 Waste collection services	Collection services of hazardous waste Collection services of non-hazardous recyclable materials General waste collection services
943 Waste treatment and disposal services	Waste preparation, consolidation and storage services Hazardous waste treatment and disposal services Non-hazardous waste treatment and disposal services
945 Sanitation and similar services	Sweeping and snow removal services Other sanitation services
944 Remediation services	Site remediation and clean-up services Containment, control and monitoring services, other site remediation services n.e.c Building remediation services Other remediation services n.e.c.
949 Other environmental protection services n.e.c.	Other environmental protection services n.e.c. including cleaning services for exhaust gases, noise abatement, and nature and landscape protection services

Source: United Nations Central Product Classification Division 94 (CPC94) Version 2.1

A detailed list of environmental services covered by CPC94 is at Annex 1.

2.2. REGULATORY FRAMEWORK

Principal central government agencies with regulatory responsibility for environmental services were identified for each economy, and where possible, relevant sub central authorities. Laws governing environmental protection and related areas (sewerage and waste water treatment, water and air pollution, soil remediation, toxic substances, waste disposal and clearance, land use, sanitation etc) were identified and reviewed, as well as relevant regulations and implementing rules.

Official English translations were not available for several laws in some economies (for example, Mexico, Russia, Chile), in which case analysis was primarily based on secondary sources of information.

Details for each economy are set out in Chapter 4, and in the attached Economy Reports.

2.3. REGULATORY MEASURES

Laws, regulations and other publicly available reports were reviewed to identify regulatory measures affecting environmental services. Measures include regulations which control economic activity in the delivery of environmental services in the domestic market. They include those which restrict or discriminate in trade and investment (such as foreign direct investment (FDI) limits and economic needs tests), as well as measures which impact on trade that are in place for public policy reasons (such as licensing requirements).

The type of measures identified are summarised in Table 2 below.

Table 2. Identified measures by type

Measure	Form of control
Limits on foreign investment	Investment screening or approval requirements, foreign equity limits, limits on foreign shareholding
Restrictions on type of legal entity	Joint venture, local incorporation requirements, local presence requirements
Restrictions on scope of service	Limits on number or type of services, geographical or location requirements
Economic needs tests	Limits on the number of service suppliers based on economic need
Licensing and approval procedures	Authorisation, approval requirements and associated requirements
Nationality and residency requirements	Mandated citizenship or residency for establishment or services delivery
Controls on workers	Controls on employment/hiring foreign workers, temporary entry requirements for business persons (excludes general visa controls), labour controls
Professional qualification requirements	Qualification and licensing requirements for workers
Government procurement restrictions	Whether services are open or closed to foreign participation, existence of preferences for domestic providers
Controls on use of land	Restrictions/limitations on foreign land ownership
Local content requirements	Mandated use of domestic content or service providers, domestically manufactured goods or technology or workers
State owned enterprises	Where there are state owned enterprises in the provision of environmental or similar services
Other	Existence of preferential subsidies for domestic suppliers, existence of government incentives for environmental services,

Source: ITS Global

Measures are both economy-wide ‘horizontal’ regulations that affect services and investment activity across the economy, as well as specific measures for environmental services which are particular to each economy.

Review of measures at sub central level was undertaken for selected economies, where: i) this is the predominant structure of regulation for environmental services and; ii) sufficient data and resources were available to enable a meaningful review. Examination of sub central (state, provincial) regulations was undertaken for the following economies: Australia (Victoria); Canada (Ontario); New Zealand (Auckland); the United States (California). Selected sub

central coverage should be considered illustrative, rather than representative of the existence and extent of regulatory measures present in a particular economy. The coverage of sub central measures in each economy is clearly set out in Chapter 4 of this report.

2.4. TRADE AGREEMENTS

Liberalisation commitments on environmental services in the WTO General Agreement on Trade in Services (GATS) and in two FTAs were reviewed for each economy (with the exception of Papua New Guinea and Russia for which no relevant FTAs exist). Selected FTAs are indicative of the nature and extent of liberalisation undertaken by respective economies in bilateral and/or regional trade arrangements and may not represent the totality of preferential access for environmental services in a particular market. FTAs and their liberalisation outcomes for environmental services are summarised for each economy in Chapter 4 of this report, and documented in detail in the attached Economy Reports.

A list of FTAs examined is at Annex 2.

3. OVERVIEW OF REGULATORY MEASURES IN APEC ECONOMIES

3.1. INSTITUTIONAL FRAMEWORKS FOR ENVIRONMENTAL SERVICES

In most APEC economies, environmental services are regulated by multiple agencies at both central and sub central level (Hong Kong, China; and Singapore being the exceptions). National environmental agencies tend to assume overall authority. Responsibility for approval, and/or operation and management of environmental services is delegated to state and municipal authorities. Regulatory responsibility is also shared with other ministries. These include health (which manages sanitation and medical waste), transport (which deals with collection and transport of wastes and hazardous wastes), trade and economic affairs (responsible for export and import of wastes and associated international obligations), planning and construction (in charge of land use), as well as specialist agencies and departments (such as national water boards, development councils etc).

Local government authorities play a major role in administration of most environmental services within their respective jurisdiction. This is particularly so for sewerage and wastewater treatment, and collection and disposal of general and industrial waste. The degree of regulatory oversight varies among economies – in some rule making is devolved to these bodies, in others they are assigned a purely administrative function. The degree of cooperation and coordination among the various agencies, and between central and sub central entities, similarly differs.

The legal framework in each economy is consistent with their regulatory structure. Most economies have framework environmental laws in place at the central level, which are then supported by either sub central legislation or with delegated legislation. Almost all legislation and delegated legislation examined includes monitoring mechanisms. Relevant laws also extend beyond ‘environmental’ laws to encompass laws and regulations on health, construction, hazardous waste, planning, sanitation, water and mining.

In some economies, regulations of sub central and/or municipal entities contain detailed requirements that are enforceable by law. In others, generally the less developed APEC economies, ‘regulations’ are largely informal (for example, developed and administered as part of normal functions), are nonexistent, or are not publicly available. The degree of discretion awarded to officials in execution of their functions also varies. How it is exercised was not investigated.

The regulatory authorities and principal laws governing environmental services in each economy is set out in Chapter 4 of this report, and in greater detail in the Economy Reports at Annex 3. The Reports provide an overview of the economy concerned given the wide reach of regulatory responsibility involved, particularly at the sub central level. The extent of information gleaned is not unrelated to the degree of transparency and extent of availability of current English language information.

3.2. REGULATORY MEASURES FOR ENVIRONMENTAL SERVICES

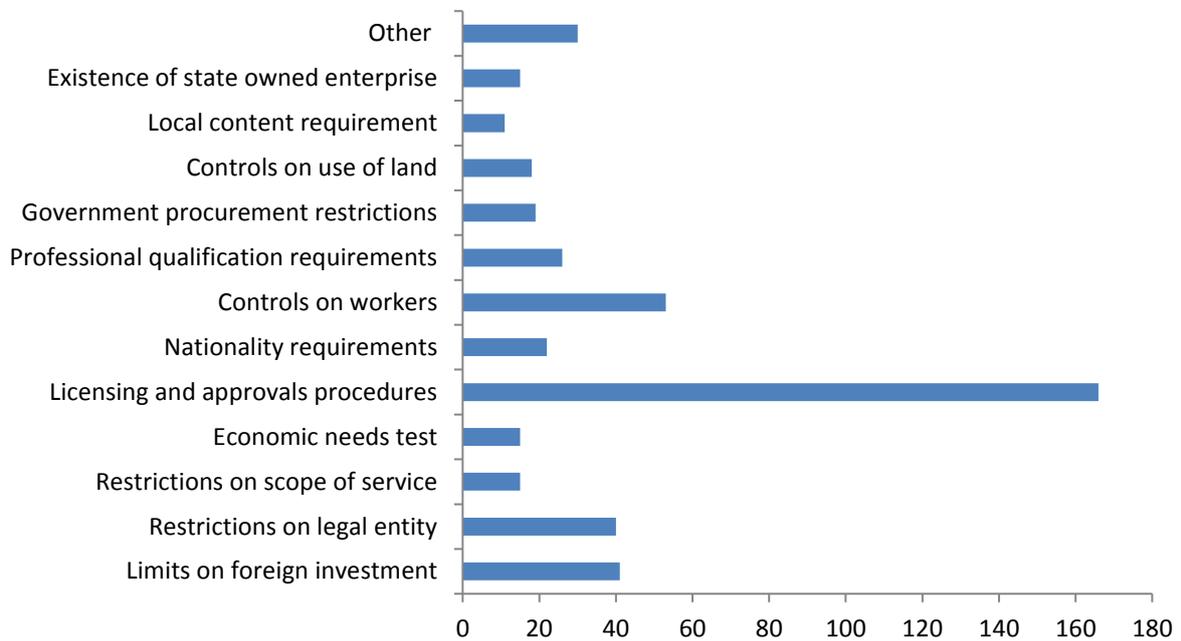
All economies examined have in place regulatory requirements which impact on environmental services. These include ‘general’ regulatory controls that apply across the economy (or ‘horizontally’) to all service sectors, as well as measures that are specific to environmental services. In total, over 460 measures were identified. While the extent and nature of regulatory requirements varies among economies, the majority of those identified are non discriminatory in application and do not directly restrict or prohibit trade and investment. Measures may act as barriers to trade where they impede the ability of foreign providers to participate in the market. Nevertheless, significant trade ‘restrictions’ apply to services delivery in many economies.

- Licensing and approval procedures are the most numerous measures impacting on environmental services. All economies have such measures in place. More than 164 were identified, more than 3 times the number of the next most prevalent measure (controls on workers) and comprising a third of the total number of measures. While licensing measures tend not to restrict trade per se, the multiplicity and complexity of requirements can impede it, particularly where approval procedures are open to administrative discretion or are lacking in transparency.
- Controls on workers, both for service providers in general, and for providers of environmental services, are also significant (over 50 measures) and widespread (present in all economies). Limits and/or conditions on the ability of business persons to participate in the market or for firms to hire foreign labour, can limit effective access for services operation and establishment.
- Limits on foreign investment restrict market access of environmental service providers in 18 economies. Most economies maintain some form of approval or screening process for foreign investment that can constrain new investment. Others limit or make conditional the amount of foreign FDI in environmental services. Investment in areas considered public utilities (including sewerage and water) are considered most sensitive.
- The majority of economies (14) maintain some form of restrictions on the form of legal entity a foreign provider must take in order to establish in the market. Requirements for local incorporation are most common, though in some economies joint ventures with local partners and investors are mandated.
- Other measures which impact on environmental services providers operating in foreign markets include: restrictions on land ownership and use by foreigners; preferences for domestic suppliers in government procurement contracts; nationality and residency requirements for boards of directors; and qualification requirements for technical personnel.

- Least common measures were those directly restricting the scope of services delivery in the market. The scope of most environmental services activities appear to be defined by the relevant license or permit which is required for operation.

Table 3 (over page) indicates the existence of regulatory measures by type of restriction across the 21 economies. Figure 1 indicates the number of identified measures by type.

Figure 1. Incidence (number) of measures by type of regulation/control



Source: ITS Global

Table 3. Regulatory measures across APEC economies by type of control

Measure/Economy	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	US	VN
Limits on foreign investment	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	×	✓
Restrictions on type of legal entity	×	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	✓	×	✓	✓	×	✓	✓	×	✓
Restrictions on scope of service	×	×	×	×	×	✓	×	✓	✓	×	✓	×	×	×	×	×	×	×	×	×	✓
Economic needs tests	✓	×	×	✓	✓	×	✓	✓	✓	✓	×	✓	×	×	✓	✓	×	×	✓	×	✓
Licensing and approval procedures	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nationality requirements	✓	✓	✓	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	×	✓	×	×
Controls on workers	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Professional qualification requirements	✓	×	✓	×	✓	×	×	✓	✓	✓	✓	×	✓	×	✓	×	✓	✓	✓	✓	✓
Government procurement restrictions	✓	✓	✓	×	✓	×	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	✓	✓	✓	✓
Controls on use of land	✓	✓	✓	✓	×	✓	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓
Local content requirements	×	×	×	×	✓	×	✓	×	×	✓	✓	×	✓	✓	✓	×	×	×	✓	×	✓
Existence of state owned enterprises	✓	?	✓	×	✓	×	✓	×	×	✓	×	×	✓	✓	×	✓	✓	?	✓	×	✓
Other	✓	✓	✓	×	×	×	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	✓	×	✓	✓

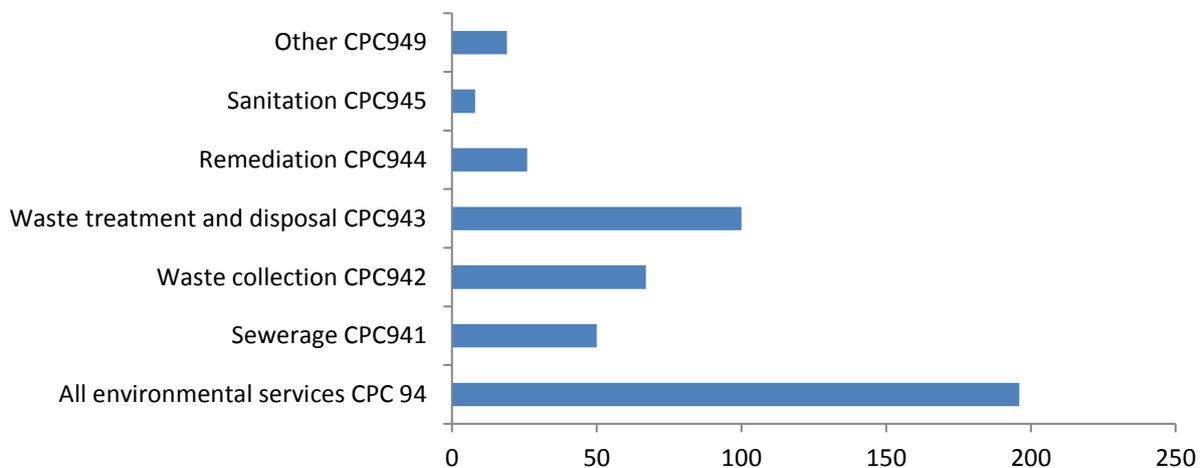
Key: × indicates no measures ✓ indicates measures exist ? indicates existence of measures unclear

The majority of measures identified apply across the range of environmental services covered by CPC94 – a total of over 195. This is mainly due to the existence of ‘horizontal’ or general measures which apply to service providers and investors across the entire economy. ‘General’ measures most commonly include limits on foreign investment, restrictions on legal entity, and controls on workers, government procurement and land. As would be expected, measures for licensing and approval tend to be specific to environmental services.

Waste treatment and disposal services are the most highly regulated service of the sub categories of environmental services covered by CPC94, with over one hundred measures identified across APEC. Waste collection is also highly regulated, though less so. Numerous regulations for the management of hazardous wastes may partly explain the higher number of measures falling under CPC943, as well as the inclusion of recycling activities, which are increasingly common in APEC economies.

Figure 2 shows the number of measures by type of service by CPC sub-category. Table 4 (over page) summarises the incidence of measures by type for each subclass of CPC94. Figures 3.1-3.7 reveal the breakdown of measures by type for each of the CPC sub categories examined.

Figure 2. Incidence (number) of measures by type of service (CPC Classification)



Source: ITS Global

Consistent with the picture of controls noted above, it is not surprising that the majority affect the operation of firms in the foreign market and about one quarter the establishment of a commercial presence. Almost 10 percent impact on the ability of business persons or professionals to deliver services.

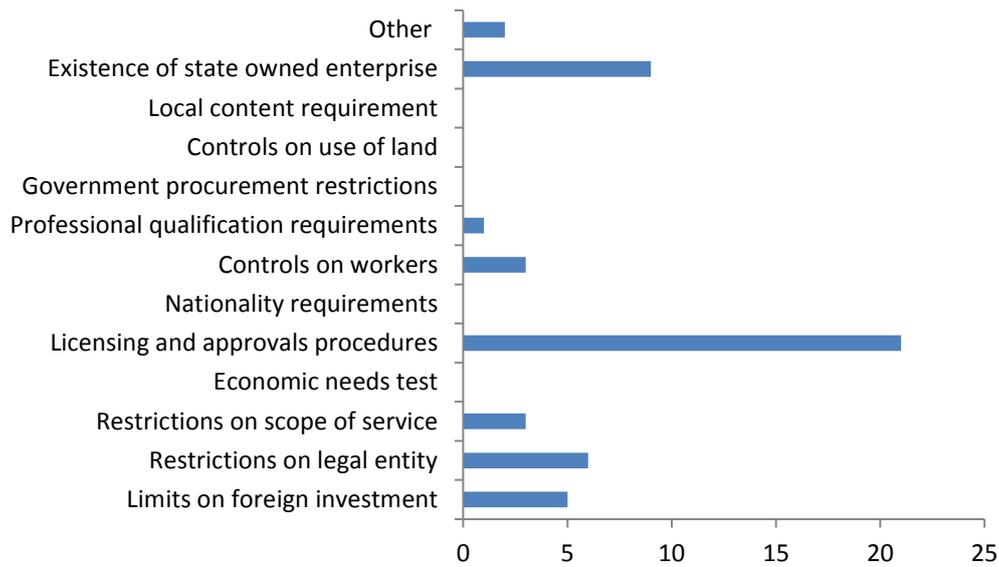
A description of the extent of regulation and type of regulatory measures present in each APEC economy follows in Chapter 4 of this report. Greater detail is included in the Economy Reports at Annex 3.

Table 4. Type of regulatory measure by CPC subclass

Measure/CPC subclass	Sewerage 941	Waste collection 942	Waste tmt & disposal 943	Remediation 944	Sanitation 945	Other 946	General (94)
Limits on foreign investment	✓	✓	✓	✓	✓	✓	✓
Restrictions on type of legal entity	✓	✓	✓	✓	✓	✓	✓
Restrictions on scope of service	✓	✓	✓	×	×	×	✓
Economic needs tests	×	×	✓	✓	×	✓	✓
Licensing and approval procedures	✓	✓	✓	✓	✓	✓	✓
Nationality requirements	×	×	×	✓	×	×	✓
Controls on workers	✓	✓	✓	✓	×	×	✓
Professional qualification requirements	✓	✓	✓	✓	✓	✓	✓
Government procurement restrictions	×	×	×	×	×	×	✓
Controls on use of land	×	×	×	×	×	×	✓
Local content requirements	×	✓	✓	×	×	×	✓
Existence of state owned enterprises	✓	✓	✓	×	×	×	✓
Other	✓	✓	✓	✓	✓	×	✓

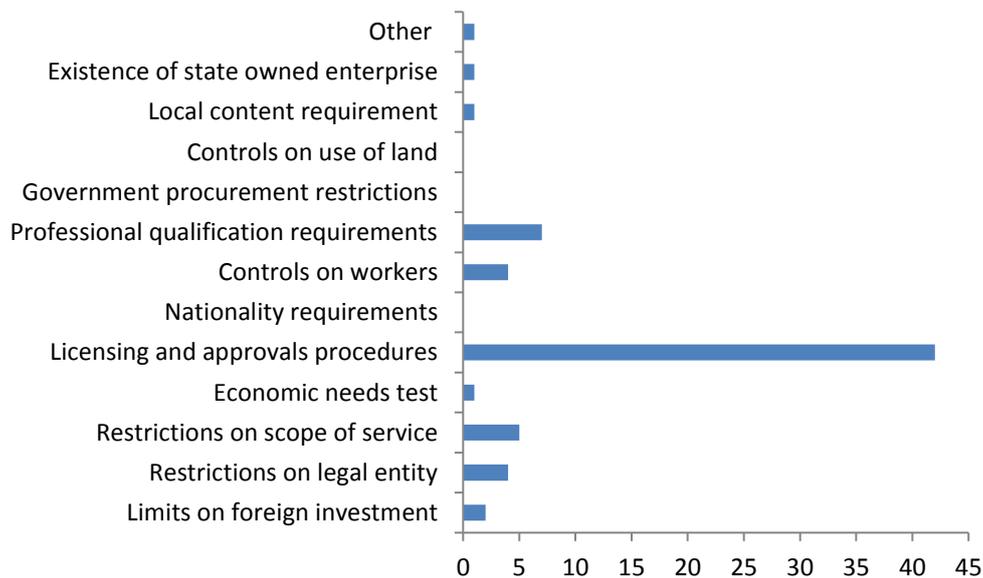
Key: × indicates no measures ✓ indicates measures exist

Figure 3.1 – Incidence (number) of measures by type of control – Sewerage services (CPC 941)



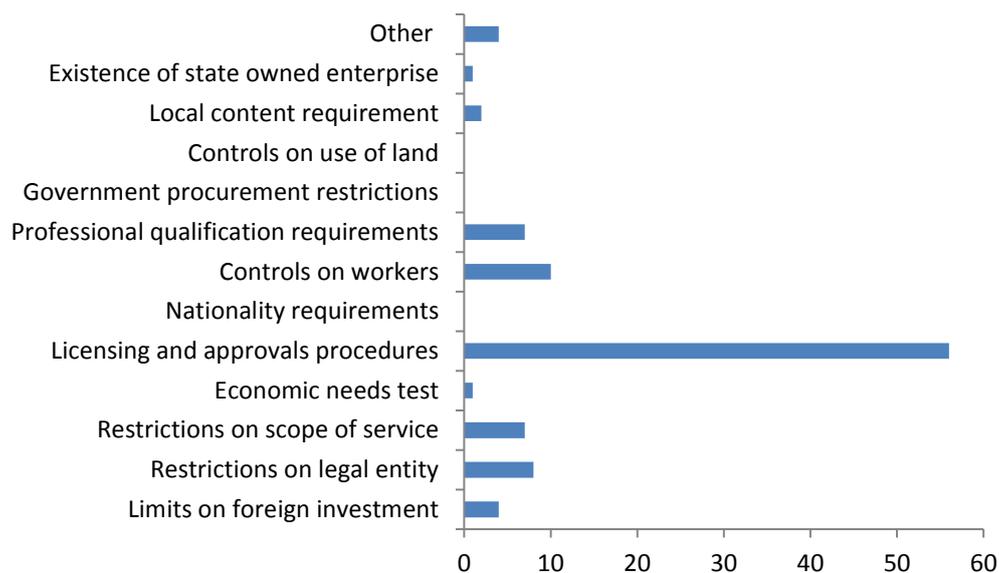
Source: ITS Global

Figure 3.2. Incidence (number) of measures by type of control – Waste collection services (CPC 942)



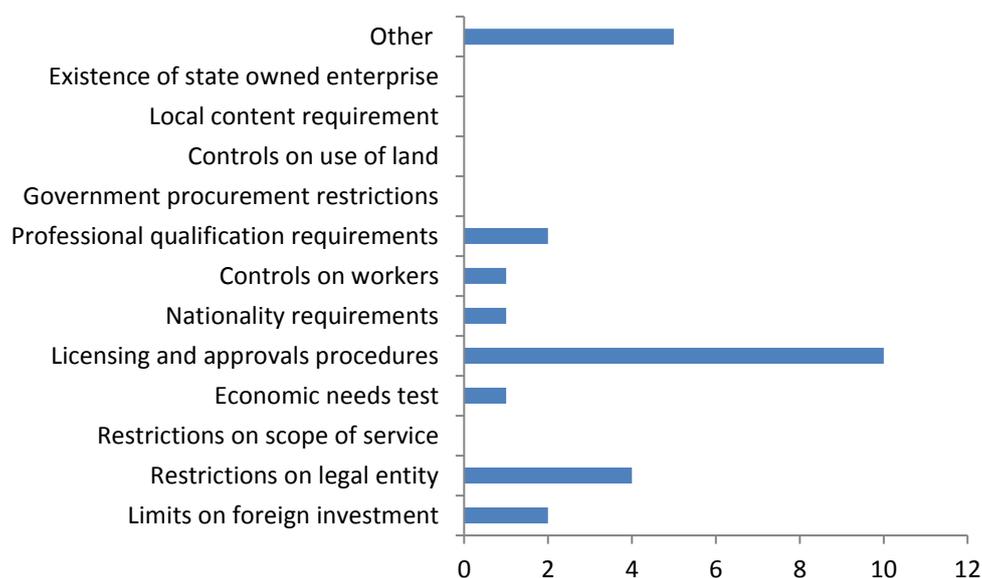
Source: ITS Global

Figure 3.3. Incidence (number) of measures by type of control – Waste treatment and disposal services (CPC 943)



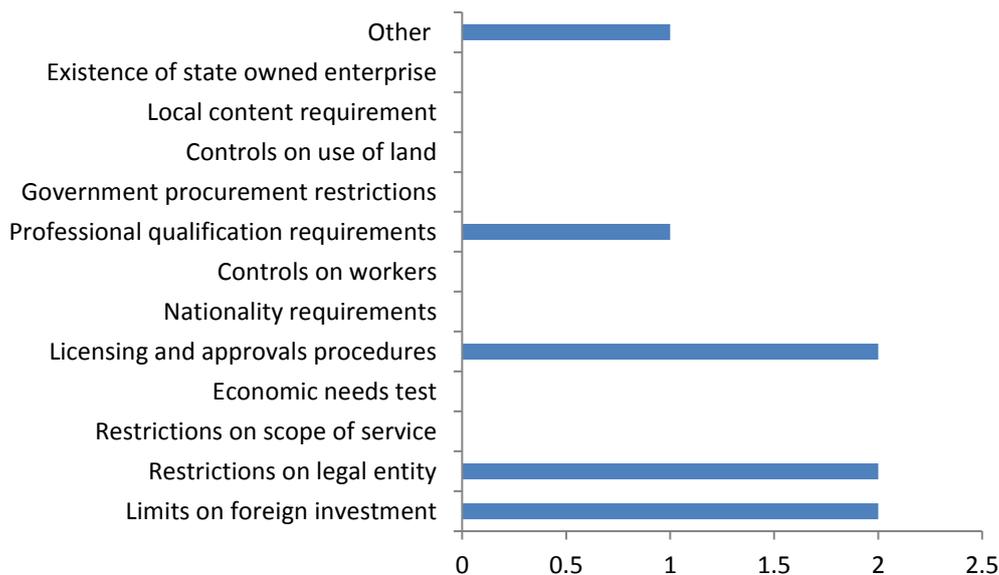
Source: ITS Global

Figure 3.4. Incidence (number) of measures by type of control – Remediation services (CPC 944)



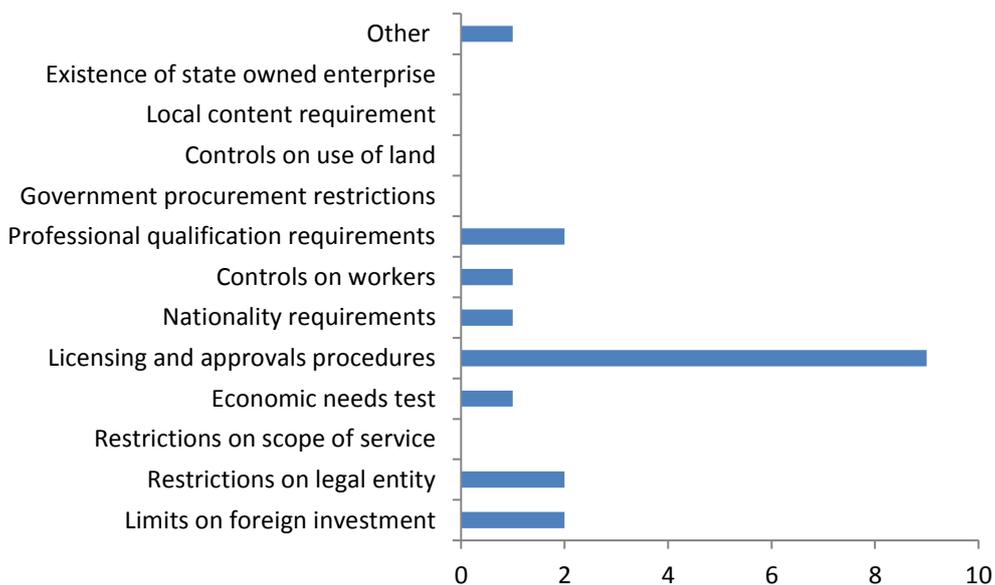
Source: ITS Global

Figure 3.5. Incidence (number) of measures by type of control – Sanitation services (CPC 945)



Source: ITS Global

Figure 3.6. Incidence (number) of measures by type of control – Other environmental services (CPC 949)



Source: ITS Global

3.3. LIBERALISATION OF ENVIRONMENTAL SERVICES IN TRADE AGREEMENTS

While not all economies have committed to market opening of environmental services in the WTO General Agreement on Trade in Services (GATS), all have improved on WTO liberalisation outcomes in subsequent FTAs: ‘GATS +’ outcomes (with the exceptions of Russia and Papua New Guinea). More recent FTAs tend to not only deepen specific commitments, but also expand the scope of liberalisation. ‘Horizontal’ restrictions tend to be maintained similarly in GATS and across FTAs.

Notwithstanding this, the extent of market opening varies among economies and agreements. Some economies maintain almost no restrictions on environmental services with FTA partners, while others have built on WTO outcomes in their FTAs to the extent the agreements include provisions for the treatment of investment, allow for the temporary entry of certain categories of business persons, and regulate related disciplines that have bearing on the delivery of these services (for example, to promote competition, to control state owned entities and monopolies, and to enhance regulatory transparency).

Table 5 below indicates the existence of specific commitments on environmental services in the GATS and selected FTAs, and whether FTA commitments are more liberal than WTO outcomes (GATS +). Liberalisation commitments (both horizontal and specific) in the WTO GATS Agreement and in two representative FTAs for each APEC economy is described in Chapter 4 of this report, and set out in detail in the Economy Reports at Annex 3.

Table 5. Liberalisation commitments in environmental services across APEC economies in the WTO and FTAs

Economy	GATS commitments	FTA commitments	FTAs GATS +
Australia	✓	✓	Yes
Brunei Darussalam	x	✓	Yes
Canada	✓	✓	Yes
Chile	x	✓	Yes
China	✓	✓	Yes
Hong Kong, China	x	✓	Yes
Indonesia	x	✓	Yes
Japan	✓	✓	Yes
Korea	✓	✓	Yes
Malaysia	x	✓	Yes
Mexico	x	✓	Yes
New Zealand	x	✓	Yes
Papua New Guinea	x	x	NA
Peru	x	✓	Yes
The Philippines	x	✓	Yes
Russia	✓	x	NA
Singapore	x	✓	Yes
Chinese Taipei	✓	✓	Yes
Thailand	✓	✓	Yes
United States	✓	✓	Yes
Viet Nam	✓	✓	Yes

Key: x indicates no specific commitments ✓ indicates specific commitments

Source: ITS Global

4. REGULATORY MEASURES IN APEC ECONOMIES

The following summaries of regulatory measures are illustrative of the extent, nature and type of regulatory measures in place in each of the APEC economies and are not determinative of the degree of restrictiveness of the market.

The number of regulatory requirements reflects formal controls, the identification of which is directly related to the level of transparency and the degree of regulation in the particular economy. Economies which are more regulated (including for public policy reasons), and for which laws are transparent and publicly available (and in English), and/or that have been examined both at the central and sub central level may have numerous controls yet maintain a relatively open market (e.g.: Hong Kong, China; the United States). Controls at the sub central level in particular reflect the degree of regulation in the particular state examined, which may or may not be indicative of market access across the economy.

For most economies, a comprehensive review of regulation was not possible due to the lack of availability of information at the sub central level. A detailed and accurate picture of measures across the economy would require on ground investigation at the municipal, local level in the economies concerned.

Caution should also be exercised in comparing the incidence of measures among APEC economies given the differences in regulatory and legal structures, trade and investment policy, and levels of development.

Measures are listed and described in greater detail in each of the Economy Reports, attached at Annex 3.

4.1 AUSTRALIA

Regulatory framework

Australian Federal Government, state and territory governments, and local governments jointly administer environmental protection. State level legislation is the predominant form of environmental legislation regulating environmental services.

Victoria was selected for examination of regulatory requirements at the sub central level as a representative Australian state.

Table 6. Summary of regulators and laws

Australia (Victoria)	Regulatory framework
Main agencies	Australian Department of the Environment (Central); Environment Protection Authority Victoria (EPA Victoria) (Sub central); Victorian Department of Environment, Land, Water and Planning (DELWP) (Sub central);
Key laws	<i>Environment Protection and Biodiversity Conservation Act 1999</i> ; (Commonwealth law); <i>Environment Protection Act (Vic) 1970</i> ; <i>Waste Management Policy (Siting, Design and Management of Landfills) (Vic)2004</i> ; <i>State Environment Protection Policy (Industrial Waste Resource) Regulations (Vic)2009</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Australia is open to foreign providers of environmental services at the central (Federal) level. General (economy-wide) controls apply to foreign investment above certain monetary thresholds. There are some restrictions on use of land. Residency requirements apply for boards of directors. Foreign workers are subject to economic needs tests.

In Victoria, businesses providing environmental services are most affected by licensing and approval requirements in state legislation and regulation. No evidence of discriminatory treatment was discovered; the market is generally open to foreign providers.

Domestic companies could be advantaged by preferential subsidies and treatment of government procurement at the state level.

Measures identified are summarised below. Most impact on the establishment of a commercial presence or operation in the market; several affect business persons or professionals seeking to deliver services.

Table 7. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	×		-
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) - 1	1
Licensing and approval procedures	✓	General (94) - 1; Sewerage(941) - 1; Waste collection (942) - 3; Waste treatment and disposal (943) - 2; Remediation (944) - 1	8
Nationality requirements	✓	General (94) - 1	1
Controls on workers	✓	General (94) - 1	1
Professional qualification requirements	✓	Waste collection (942) - 1	1
Government procurement restrictions	✓	General (94) - 1	1
Controls on use of land	✓	General (94) - 1	1
Local content requirements	×		-
Existence of state owned enterprises	✓	Sewerage(941) - 1	1
Other (preferential subsidies)	✓	General (94) - 1	1
TOTAL (Central and sub central)			17

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Australia has made liberalisation commitments on environmental services in the GATS and in FTAs across modes 1, 2 and 3. Some horizontal restrictions remain for screening of foreign investment (mode 3) and for temporary entry of natural persons (mode 4).

Table 8. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
Malaysia Australia Free Trade Agreement (MAFTA)	✓	Yes
China Australia Free Trade Agreement (CHAFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.2 BRUNEI DARUSSALAM

Regulatory framework

Regulatory responsibility for environmental services in Brunei Darussalam (Brunei) is shared among several central departments. The Department of Environment, Parks and Recreation regulates waste management, environmental conservation and management, management of landscape and recreational areas. The Public Works Department manages the sewerage system. The Brunei Fire Services and Rescue Department and the Police Department have specific authority in relation to waste control and management.

Table 9. Summary of regulators and laws

Brunei Darussalam	Regulatory Framework
Main agencies	Department of Environment, Parks and Recreation; The Public Works Department; Fire Services and Rescue Department and the Police Department
Key laws	<i>Environmental Protection and Management Order 2016; Environmental Impact Assessment Order 2011 (Draft); Hazardous Waste (Control of Export and Transit) Order 2013; Water Supply Act 2014; Pollution Control Guidelines for Industrial Development in Brunei Darussalam 2003</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Brunei retains economy wide controls on certain investments. Foreign equity in some environmental services is limited and subject to approval. Controls on establishment apply - foreign providers of waste management services must be established in Brunei and registered with the authorities; local agents are mandated for companies established as branches of foreign companies. Government approval is also required before foreign labour may be hired. Joint venture requirements apply for participation in government procurement contracts, though the government does offer financial incentives for investment in environmental activities and technologies.

Brunei operates state-owned monopolies in key sectors of the economy, such as oil and gas, telecommunications, transport, and energy generation and distribution. The extent to which state-owned enterprises are present in the environmental services sector is not known.

Measures identified are summarised by type and by service below.

Table 10. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 2; Sanitation (945) -1; Other (949) – 1	4
Restrictions on type of legal entity	✓	General (94) – 3; Other (949) – 1	4
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	General (94) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) - 1	4
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 2; Waste collection (942) – 1	3
Professional qualification requirements	×		-
Government procurement restrictions	✓	General (94) – 2	2
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	?		-
Other	✓	General (94) – 1; Sanitation (945) -1; Other (949) – 1	3
TOTAL (Central and sub central)			22

Key: × indicates no restrictions ✓ indicates restrictions exist ? indicates existence of restrictions unclear

Liberalisation in trade agreements

Brunei has no specific commitment to liberalise environmental services in the WTO GATS. Horizontal restrictions on market access apply to commercial presence of foreign companies as noted above. There are discriminatory requirements for the composition of boards of directors and for use of local agents.

Brunei's recent FTAs reflect GATS commitments. They are GATS plus to the extent they include disciplines to enhance transparency in the operation of the business environment.

Table 11. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	✓	Yes
Japan Brunei Darussalam Economic Partnership Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.3 CANADA

Regulatory framework

Environmental services are primarily regulated by provincial and territorial governments under the umbrella of central (federal) legislation. Responsibilities are delegated to municipalities which regulate activities through the issuance of bylaws. Regulations vary by jurisdiction. Ontario was selected for examination of regulatory requirements at the sub central level as a representative Canadian province.

Many municipal governments provide environmental services directly to the public. For those services that have been privately contracted, municipal Conservation Authorities conduct monitoring and management of private environmental services contracts.

Table 12. Summary of regulators and laws

Canada (Ontario)	Regulatory Framework
Main agencies	Environment and Climate Change Canada (central); Ministry of the Environment and Climate Change (Ontario)
Key laws	<i>Canadian Environmental Protection Act 1999</i> (central); <i>Environmental Protection Act 1990</i> (Ontario) plus various regulations
Monitoring mechanisms in laws	Yes

Regulatory measures

Canada's market for environmental services is open at the central (federal) level with the exception of approval requirements for certain investments and limits on temporary entry of personnel. Canada applies domestic preferences in government procurement policy.

At the sub central (provincial level), requirements for environmental services providers vary by province. In Ontario, licensing and permits are required to operate in the province and to conduct environmental services activities. There are no specific controls on market access, including establishment. Operation is subject to general measures including differential tax treatment for non residents and residency requirements for boards of directors.

The existence of state owned enterprise (crown companies or business enterprises) at the federal and provincial level is not clear.

The review of regulatory requirements was confined to regulation at the central government level and in Ontario. Examination across a greater number of provinces could produce further requirements at the sub central level.

Measures identified are summarised by type and by service below.

Table 13. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 2	2
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	General (94) – 1; Sewerage (941) – 2; Waste collection (942) – 4; Waste treatment and disposal (943) – 4	11
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	✓	Waste collection (942) – 1	1
Government procurement restrictions	✓	General (94) – 2	2
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	✓	Sewerage (941) – 2	2
Other	✓	General (94) – 1; Remediation (944) – 1	2
TOTAL (Central and sub central)			24

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Canada has made full liberalisation commitments under the GATS for environmental services, covering all the sub-sectors of sewage services, refuse disposal services, sanitation and similar services, and other environmental services. Horizontal restrictions apply, which generally reflect the few controls on investment and movement of personnel.

Canada similarly maintains no specific restrictions in its FTAs, which generally follow a negative list approach and reaffirm the open commitments already made in the WTO.

Table 14. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
Canada Korea Free Trade Agreement	✓	Yes
Canada Chile Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.4 CHILE

Regulatory framework

Environmental services fall primarily under the purview of Chile's Environment Ministry and the Environmental Superintendence, though responsibility is shared with other central government agencies, among them the Ministry of Health and the Superintendence of Sanitary Services. *The Environmental Framework Law* (Law No. 19,300) provides a central legislative basis for the environmental laws and regulations in Chile.

Table 15. Summary of regulators and laws

Chile	Regulatory Framework
Main agencies	The Ministry of the Environment; The Environmental Superintendence; Environmental Evaluation Service
Key laws	<i>Environmental Framework Law (Law No.19,300/94)</i> ; plus various Regulations and Decrees
Monitoring mechanisms in laws	Yes

Regulatory measures

At the central level the market is open, with very few controls placed on foreign investors and service providers. Business persons can work in Chile under various visa arrangements. Principal barriers to business are in the form of nationality requirements for staff employed by service suppliers in Chile.

At the sub central level licensing and approval procedures are applied on a non discriminatory basis. Chile maintains a right to impose establishment and local incorporation requirements for the provision of some environmental services (e.g.: sanitation; waste water collection, disposal and treatment; sewerage) in accordance with Chilean law. The extent to which this right exists under Chilean law or is exercised by Chilean authorities is not clear.

The full range of regulation applied by sub central authorities, and their impact on foreign providers, are not known. The list of measures presented below may therefore understate the number and extent of measures present in the market.

Measures identified are summarised below.

Table 16. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	×		
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) – 2; Remediation (944) – 1	6
Nationality requirements	×	General (94) – 1	1
Controls on workers	✓	General (94) – 2	2
Professional qualification requirements	×		-
Government procurement restrictions	×		-
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	×		-
Other	×		-
TOTAL (Central and sub central)			13

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Chile has made no specific commitments on environmental services in the WTO GATS. Nationality requirements for workers apply horizontally.

Chile is a party to several ‘negative list’ FTAs which include some liberalisation commitments on environmental services, though most are subject to local incorporation and domestic law requirements.

Table 17. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
United States Chile Free Trade Agreement	✓	Yes
Chile Australia Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.5 CHINA

Regulatory framework

Regulatory responsibility for environmental services is shared between the Ministry of Housing, Urban and Rural Development (MOHURD) and the Ministry of Environmental Protection (MEP) at the central government level. The National Development and Reform Commission plays a coordinating role between agencies on policy matters related to municipal solid waste management. Counterparts of the MEP and MOHURD at the provincial and city (sub central) level, implement and oversee laws and regulations in local communities.

Table 18. Summary of regulators and laws

China	Regulatory Framework
Main agencies	Ministry of Housing, Urban and Rural Development; The Ministry of Environmental Protection; National Development and Reform Commission
Key laws	<i>Environment Protection Law 2015; Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste 2005</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Approval is required for foreign investments, sometimes by multiple agencies, though the process may be increasingly liberalised under a proposed *Draft Foreign Investment Law*.¹ Investment in some environmental services is encouraged through preferential tax treatment and incentives. Majority foreign ownership is permitted. There are however, controls on establishment, including mandated joint venture requirements.

There are restrictions on foreign workers – economic needs tests apply except where foreign expertise is deemed necessary. Most environmental services are subject to licensing and approval at the municipal level. Licensing criteria does not preclude nor discriminate against foreign providers.

State-owned enterprises (SOE) dominate China's wastewater treatment industry. SOE-backed companies treat close to 70 percent of all waste water in China. SOEs may enjoy advantages in securing new water treatment projects and assets, negotiating terms with municipal governments and accessing lower-cost capital compared to foreign and privately owned companies. Foreign providers may also be disadvantaged in government procurement contracts by the existence of controls that favour domestic firms and service providers, including nationality and local content requirements.

The application of regulations at the sub central level, and their impact on foreign providers, are not known. The list of measures presented below may therefore understate the number and extent of measures present in the market.

¹ In January 2015 the China Ministry of Commerce officially released the Draft Foreign Investment Law to solicit public comments. If passed, this law will replace the three existing foreign investment laws – Sino-Foreign Equity Joint Venture Law (“EJV Law”), Sino Foreign Cooperative Joint Venture Law (“CJV Law”) and Wholly Foreign-Owned Enterprises Law (“WFOE Law”).

Table 19. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	✓	General (94) – 1; Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1; Sanitation (945) – 1; Remediation (944) – 1	6
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 1; Waste collection (942) – 2; Waste treatment and disposal (943) – 4	7
Nationality requirements	×		-
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	✓	General (94) – 1; Waste treatment and disposal (943) – 2	3
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	×		-
Local content requirements	✓	General (94) – 1	1
Existence of state owned enterprises	✓	General (94) – 1	1
Other	×		-
TOTAL (Central and sub central)			22

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

China's commitments on environmental services in recent FTAs are more liberal than commitments under the WTO GATS. For example, under the China/Australia Free Trade Agreement, China has made concessions on mode 3 to permit wholly owned foreign enterprises for some environmental services (e.g: sewerage services), as well as limited commitments on mode 4 for temporary entry of certain categories of workers.

Table 20. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
China Australia Free Trade Agreement (CHAFTA)	✓	Yes
ASEAN China Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.6 HONG KONG, CHINA

Regulatory framework

Environmental services in Hong Kong, China are regulated centrally through the Environment Bureau of the Hong Kong Special Administrative Region. The Environmental Protection Department (EPD) and its various divisions administer environmental policy and enforce environmental legislation over the whole territory. The Drainage Services Department has regulatory responsibility for stormwater drainage, sewage collection and treatment, and flood prevention.

Table 21. Summary of regulators and laws

Hong Kong, China	Regulatory framework
Main agencies	The Environment Bureau of the Hong Kong Special Administrative Region, Environmental Protection Department (EPD); Drainage Services Department of the Hong Kong Special Administrative Region;
Key laws	<i>Waste Disposal Ordinance 1980</i> and its regulations; <i>Water Pollution Control Ordinance 1997</i> and regulations; <i>Environmental Impact Assessment Ordinance 1998</i> ; <i>Public Health and Municipal Services Ordinance 1960</i> ; <i>Hazardous Chemicals Control Ordinance 2008</i> and regulations
Monitoring mechanisms in laws	Yes

Regulatory measures

The Hong Kong, China economy is open to foreign investment and participation. Foreigners can engage in the full range of services, including environmental services, in Hong Kong, China once they are registered as a business.

Environmental services are affected by numerous licensing requirements, with various licences/permits required for different activities. Licensing criteria are publicly available and transparent. Foreign businesses are not precluded, though natural persons who apply for licences/permits must be Hong Kong, China residents in order to be eligible for licensing.

Measures identified are summarised by type and by service below.

Table 22. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	×		-
Restrictions on type of legal entity	×		-
Restrictions on scope of service	✓	Waste collection (942) – 1; Waste treatment and disposal (943) – 1	2
Economic needs tests	×		-
Licensing and approval procedures	✓	Sewerage(941) – 3; Waste collection (942) - 4; Waste treatment and disposal (943) – 3; Other (949) – 2	12
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	×		-
Government procurement restrictions	×		-
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	×		-
Other	×		-
TOTAL			17

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Although Hong Kong, China has not committed to liberalisation of environmental services in the WTO, it has made full / almost full liberalisation commitments in its FTAs with New Zealand and with Chile respectively and both agreements include ‘GATS+’ commitments. There are also provisions in both FTAs covering government procurement and promoting competition.

Table 23. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	–
Free Trade Agreement between Hong Kong, China and Chile	✓	Yes
Hong Kong, China - New Zealand Closer Economic Partnership Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.7 INDONESIA

Regulatory framework

Environmental services are regulated by multiple agencies at the central and sub central level. Primary responsibility lies with the Ministry of Environment and Forestry and its regional management agencies at municipal level. District and local governments maintain responsibility for most public services including wastewater management, sewerage and specific waste management services, where there is also a presence of state-owned enterprises (SOE).

Table 24. Summary of regulators and laws

Indonesia	Regulatory Framework
Main agencies	Ministry of Environment and Forestry; Regional Environmental Management Agency; Ministry of Public Works
Key laws	<i>Law No. 32 of 2009 on Environmental Protection and Management; Law No. 18/2008 for Municipal Solid Waste; plus various Regulations of the Ministry of Environment</i>
Monitoring mechanisms in laws	Unclear

Regulatory measures

Numerous restrictions apply to foreign services providers and investors across the economy. These include, for example; foreign equity limits, approvals and joint venture requirements for investments. Foreign workers are subject to economic needs tests. Nationality requirements exist for directors in foreign invested companies. Preferences to encourage domestic sourcing and maximise local content are accorded for government procurement contracts. There are controls on land ownership and use.

The provision of environmental services requires multiple licences from various ministries and authorities at the central and sub central level (i.e.: operating permits; business licences; investment licenses; environmental licenses; environmental impact assessments).

Business operators may be disadvantaged by the lack of certainty surrounding the legal framework for waste management activities, particularly at sub central level. It is not clear that all aspects of environmental services provision are regulated (e.g.: clean up and remediation of land). Applicability and implementation of laws can lack transparency (e.g.: following annulment of the *Water Resources Law* in 2015.) The government has a mandate to revise various regulations over time – it is not clear how far this process has advanced.

The government plays a key role in the provision of environmental services. SOEs exist, particularly in the form of local government owned water and waste management utilities.

The number and nature of measures identified (see below) may be understated given that the extent of applicable regulation at the sub central level was not reviewed.

Table 25. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1; Waste treatment and disposal (943) – 1	2
Restrictions on type of legal entity	✓	General (94) – 2	2
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 3; Waste collection (942) – 2; Waste treatment and disposal (943) – 2	7
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 2	2
Professional qualification requirements	×		-
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	General (94) – 1	1
Existence of state owned enterprises	✓	General (94) – 1	1
Other	✓	General (94) – 2; Remediation (944) – 1	3
TOTAL (Central and sub central)			22

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Indonesia has not committed to liberalisation of environmental services in the WTO GATS. Several restrictions on services trade apply horizontally. Similarly, recent regional FTAs to which Indonesia is a party (AANZFTA and AKFTA) do not significantly improve on WTO outcomes. They do not include specific commitments on environmental services. Agreements are ‘GATS plus’ only to the extent they include related disciplines to encourage competition in the market.

Table 26. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	×	Yes
ASEAN Korea Free Trade Agreement (AKFTA)	×	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.8 JAPAN

Regulatory framework

Administration of waste management is clearly defined as part of the national government's environmental administration system and is centrally controlled by the Ministry of the Environment. Statutory administrative duties, including discretionary adoption of stricter standards, improvement orders and other regulatory enforcement measures, are delegated to prefecture and local governments.

Table 27. Summary of regulators and laws

Japan	Regulatory Framework
Main agencies	Ministry of Environment (MOE), plus Local governments (47 prefectures and 1400 municipalities)
Key laws	<i>Basic Environmental Law</i> (Law No. 91 of 1993); <i>Waste Management and Public Cleansing Law</i> (Law No. 137 of 1970) plus Cabinet Orders and Regulations; <i>Sewerage Law</i> (Law No. 79 of 1958); various laws for recycling activities.
Monitoring mechanisms in laws	Yes

Regulatory measures

Japan maintains very few controls on services trade and investment or regulations that discriminate against foreign providers. Market access challenges are more closely related to prevailing practices in the business environment, such as cultural and linguistic differences, exclusive supplier networks and alliances between business groups, rather than government regulations.²

Environmental services providers however, face a multitude of licensing requirements at the sub central level. Different licences are required for the establishment and provision of waste collection, disposal and treatment services. Specific licensing regimes and standards apply for recycling activities. There appear to be economic needs tests for handling of municipal waste. Public procurement of environmental services is supported by the government. Participation by SMEs in particular is encouraged.

Measures identified are summarised by type and by service below.

² Export.gov, *Japan Commercial Guide 2016*, accessed at <https://www.export.gov/apex/article2?id=Japan-Market-Challenges>

Table 28. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	✓	Waste treatment and disposal (943) – 2	2
Economic needs tests	✓	Waste collection (942) – 1	1
Licensing and approval procedures	✓	General (94) – 1; Waste collection (942) – 3; Waste treatment and disposal (943) – 5; Remediation (944) – 2; Other (949) – 2	13
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 2; Waste treatment and disposal (943) – 1	3
Professional qualification requirements	✓	Waste collection (942) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	×		-
Local content requirements	×		-
Existence of state owned enterprises	×		-
Other	✓	General (94) – 1; Remediation (944) – 1	2
TOTAL (Central and sub central)			26

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

In recent FTAs (including with Australia and with Mexico), Japan has liberalised environmental services – no specific restrictions are applied. FTAs tend to be comprehensive and supported by wider disciplines to promote competition in the market and improve transparency.

Japan's commitments in the WTO GATS are liberal, with modes 2 and 3 generally open to foreign providers.

Table 29. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
Japan Australia Free Trade Agreement (JAIPA)	✓	Yes
Japan Mexico Economic Partnership Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.9 KOREA

Regulatory framework

Environmental services in Korea are regulated at the sub central (regional) level, with central oversight. The Ministry of Environment (MOE) is the main government organisation in charge of establishing environmental policies and enforcing environmental laws. Regional Environmental Offices act as specialized local administrative agencies to manage implementation of environmental laws and policy. Local authorities are responsible for formulating and executing waste management policies in accordance with national laws and as delegated by the MOE.

Table 30. Summary of regulators and laws

Korea	Regulatory framework
Main agencies	The Ministry of Environment (MOE); MOE Regional Environmental Offices in Wonju, Daegu, and Saemangeum and River Basin Environmental Offices at Hangang, Nakdonggang, Geumgang, and Yeongsansan
Key laws	<i>Framework Act on Environmental Policy 2013 (and Decrees); Sewerage Act 2013; Wastes Control Act 2015 (and Decrees); Promotion of installation of waste disposal facilities and assistance, and so on to the Adjacent Areas Act 2015; Environmental Technology and Support Act 2014</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Several restrictions apply to services, including environmental services, which impact on the establishment of a commercial presence and operation in the Korean market. Generally there are some controls on foreign investment and limits on the entry of foreign workers and natural persons. Residency requirements apply for boards of directors. Land acquisition is restricted.

More specifically, the following regulatory requirements apply to environmental services:

- Quotas for environmental service suppliers;
- Local establishment requirements for sewerage, and for the management, collection and transport of waste;
- Mandatory worker education and training and financing of such by employers;
- Economic needs tests for the provision of some services (e.g.: conduct of environmental impact assessment);
- Appointment of local agents for delivery of services;
- Discretion in the award of licensing and approval requirements at the municipal level;
- Reservation of some services to Korean government and research entities (e.g.: soil contamination agencies, some remediation services).

Measures identified are summarised by type and by service below.

Table 31. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number	Total no. of measures
Limits on foreign investment	✓	General (94) – 1; Sewerage (941) – 1	2
Restrictions on type of legal entity	✓	Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 4; Sanitation (945) – 1; Remediation (944) – 3; Other (949) – 1	11
Restrictions on scope of service	✓	Sewerage (941) – 2; Waste collection (942) – 2; Waste treatment and disposal (943) – 2	6
Economic needs tests	✓	Waste treatment and disposal (943) – 1; Remediation (944) – 1; Other (949) – 1	3
Licensing and approval procedures	✓	Sewerage (941) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) – 4; Remediation (944) – 2	9
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 1; Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 2; Remediation (944) – 1	6
Professional qualification requirements	✓	Waste treatment and disposal (943) – 1; Remediation (944) – 1	2
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	×		-
Other (preferential subsidies)	✓	General (94) – 1; Sewerage (941) – 1; Waste treatment and disposal (943) – 2; Remediation (944) – 1	5
TOTAL			47

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Although Korea has specific commitments on environmental services in the GATS, they reflect the existence of regulatory controls that are identified above. Liberalisation accorded in FTAs does little to further open the market, though it is supported by related commitments which seek to improve transparency and address anti-competitive behaviour.

Table 32. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	–
Korea United States Free Trade Agreement	✓	Yes
Korea Australia Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.10 MALAYSIA

Regulatory framework

Regulatory authority for environmental services is spread across various central agencies, some with overlapping responsibility. Waste management is regulated by various departments of the Ministry of Natural Resources and Environment, the Ministry of Housing and Local Government, the Ministry of Energy, Green Technology, and Water, as well as the National Solid Waste Management Department, a federal institution set up in 2007.

Table 33. Summary of regulators and laws

Malaysia	Regulatory framework
Main agencies	Ministry of Natural Resources and Environment (Department of Environment Ministry of Housing and Local Government; Ministry of Energy, Green Technology, and Water (Sewerage Services Department); National Solid Waste Management Department
Key laws	<i>Environmental Quality Act 1974</i> (and regulations); <i>Solid Waste and Public Cleansing Management Act 2007</i> ; <i>Water Service Industry Act 2006</i>
Monitoring mechanisms in laws	Yes

Regulatory controls

Foreign providers of environmental services are constrained by a range of controls affecting establishment, operation in the market and engagement of foreign workers.

- Controls on foreign investment exist for some environmental services (e.g.: waste water treatment), including local incorporation requirements, mandated joint ventures and limits on aggregate foreign shareholding (of between 30 and 50 percent).
- Establishment and/or operation in the market is generally subject to licensing and approval;
- Local content requirements apply for eligibility for some tax incentives, including for machinery used for waste management services;
- Workers and expatriate personnel are subject to economic needs tests and numerical limits.

General requirements on foreign services providers and investors also apply. These include nationality/residency requirements for boards of directors, restrictions on foreigners owning land, restrictions on government procurement contracts, and preferences for bumiputera enterprises and investors.

Measures identified are summarised by type and by service below.

Table 34. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1; Sewerage (941) – 1; Waste treatment and disposal (943) – 1; Remediation (944)- 1; Other (949) – 1	5
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 5; Sanitation (945) – 1; Remediation (944)- 1; Other (949) – 1	10
Nationality requirements	✓	General (94) – 3	3
Controls on workers	✓	General (94) – 2; Other (949) – 1	3
Professional qualification requirements	✓	Remediation (944) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	Waste collection (942) – 1; Waste treatment and disposal (943) – 1	2
Existence of state owned enterprises	✓	Sewerage (941) – 1	1
Other (preferential subsidies)	✓	General (94) – 1	1
TOTAL			30

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Malaysia's commitments in recent FTAs improve on liberalisation outcomes under the GATS. Environmental services are partially liberalised across modes 1-3, though remain subject to conditions and horizontal restrictions on both market access and national treatment.

Table 35. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	–
Malaysia Australia Free Trade Agreement (MAFTA)	✓	Yes
Malaysia New Zealand Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.11 MEXICO

Regulatory framework

At the central (federal) level, the Secretariat of the Environment and Natural Resources (SEMARNAT) is the main governmental agency in charge of enacting and enforcing environmental regulation. Municipal (sub central) governments are charged with managing municipal solid waste, including the issuance of applicable regulations and ordinances. They also grant authorizations and concessions to provide waste collection, transfer, treatment, and disposal services.

Examination of measures at the sub central level was not technically feasible due to constraints on the availability of English language resources.

Table 36. Summary of regulators and laws

Mexico	Regulatory Framework
Main agencies	Secretariat of the Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales) (SEMARNAT); National Water Commission (Comisión Nacional del Agua) (CONAGUA)
Key laws	<i>The General Law of Ecological Equilibrium and Environmental Protection (LGEEPA) and its Regulations; The General Law for the Prevention and Integral Management of Wastes (Ley General para la Prevención y Gestión Integral de los Residuos- LGPGIR) and its Regulations; The Regulations on Land Transportation on Hazardous Materials and Waste</i>
Monitoring mechanisms in laws	Yes (based on unofficial translation)

Regulatory measures

Environmental service providers in Mexico face few restrictions on investment at the central (federal) level, though their operation in the market may be constrained by nationality requirements which apply to hire of foreign labour. Mexico also maintains local content requirements and domestic preferences for some government procurement contracts, especially for public works. There are controls on land ownership.

Various licenses and authorisations are required from government agencies in order to deliver waste management services (collection, transportation, treatment, disposal).

Regulations applied by state authorities, and their impact on foreign providers, are not known. The list of measures presented below may therefore not be representative of the number and extent of regulation in the market.

Table 37. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	×		-
Restrictions on scope of service	✓	Waste treatment and disposal (943) – 1	1
Economic needs tests	×		-
Licensing and approval procedures	✓	General (94) – 4; Sewerage (941) – 1; Waste collection (942) – 2; Waste treatment and disposal (943) – 3; Remediation (944) – 2	12
Nationality requirements	✓	General (94) – 1; Remediation (944) – 1	2
Controls on workers	✓	General (94) – 2	2
Professional qualification requirements	✓	Waste collection (942) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	General (94) – 1	1
Existence of state owned enterprises	×		-
Other	×		-
TOTAL (Central and sub central)			22

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Though Mexico has few recent and active FTAs with APEC economies, environmental services are fully open in its bilateral agreement with Japan. This agreement builds on liberalisation outcomes under the WTO GATS where Mexico has no specific commitments for environmental services. In contrast, Mexico's Economic Partnership Agreement with the European Community does not include specific commitments which expand liberalisation of environmental services.

Table 38. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
Mexico Japan Economic Partnership Agreement	✓	Yes
Economic Partnership, Political Coordination and Cooperation Agreement between the European Community and its Member States, and Mexico	×	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.12 NEW ZEALAND

Regulatory framework

Environmental matters are regulated and legislated at the central level. Regional and district authorities have delegated responsibility for administering solid and hazardous waste standards, operating and managing environmental services, and developing relevant bylaws within their districts.

Auckland (Auckland Council) was selected for examination of regulatory requirements at the sub central level.

Table 39. Summary of regulators and laws

New Zealand (Auckland)	Regulatory framework
Main agencies	Ministry for the Environment; Department of Conservation; Environmental Protection Authority; Auckland Council
Key laws	<i>Resource Management Act 1991; Waste Minimisation Act 2008; Hazardous Substances and New Organisms Act 1996</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

The New Zealand market for environmental services is generally open to foreign services providers. There are few measures which affect the establishment of a commercial presence or operation in the market.

At the central level, certain investments require approval, especially in sensitive sectors. Foreign workers are subject to permits and economic needs tests. Residency requirements apply for boards of directors.

At the regional and local level, waste operators require licenses and approvals. In Auckland, foreigners are not precluded from establishing or delivering any particular environmental service, nor subject to discriminatory requirements when doing so.

Identified measures are summarised by type of requirement and by service below.

Table 40. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	×		-
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	Sewerage (941) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) – 1	4
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	×		-
Government procurement restrictions	×		-
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	×		-
Other	✓	General (94) – 1	1
TOTAL (Central and sub central)			10

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

New Zealand has not liberalised environmental services in the GATS, but has made significant market opening commitments in recent FTAs. For example, New Zealand has made full commitments in environmental services under the Korea/New Zealand FTA. In AANZFTA New Zealand maintains no restrictions on most environmental services across modes 1-3. Exceptions to market opening in the FTAs (set out in horizontal commitments) are regulatory controls at the central level which are consistent with the regulatory picture noted above.

Table 41. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
New Zealand Korea Free Trade Agreement	✓	Yes
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.13 PAPUA NEW GUINEA

Regulatory framework

Regulation of environmental services in Papua New Guinea (PNG) is limited and relatively informal – there are few central government authorities with dedicated environmental or waste management responsibilities and few laws that extend their reach across the services concerned. Local governments are empowered to formulate policies, legislation and by laws related to solid waste management.

Table 42. Summary of regulators and laws

Papua New Guinea	Regulatory Framework
Main agencies	Conservation and Environment Protection Authority; National Capital District Commission; Department of Health
Key laws	<i>Environment Act 2000 (amended 2014); Conservation and Environment Protection Authority Act 2014; Public Health Act 1973 (amended 2015); Water Resources Act 1982; Organic Law on Provincial and Local Level Governments 1995</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Environmental services are subject to general, economy wide measures governing foreign trade and investment. Numerous measures apply for approvals of foreign investment, including a national interest test for acquisition of local companies by foreigners. There are controls on recruitment of skilled workers. Certain occupations are reserved for PNG nationals. There are restrictions on foreign land ownership. State owned enterprises operate in the delivery of wastewater and sewerage services. Local content requirements and domestic preferences apply in government procurement contracts.

Lack of transparency of regulations and their administration may also impede the operation of foreign services providers in PNG.

Applicable measures are summarised below.

Table 43. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	General (94) – 2; Sewerage (941) – 1; Waste treatment and disposal (943) – 1	4
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 2	2
Professional qualification requirements	✓	General (94) – 1	1
Government procurement restrictions	✓		1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓		1
Existence of state owned enterprises	✓	Sewerage (941) - 1	1
Other	✓	General (94) – 1	1
TOTAL (Central and sub central)			15

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

PNG has not liberalised environmental services in the GATS. PNG has not concluded any FTAs, including with APEC economies, which cover trade in services.

Table 44. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.14 PERU

Regulatory framework

Peru's regulation of environmental services is highly decentralised. Several ministries and central authorities participate in environmental policy making at the national level. Rulemaking and administration is delegated to regional and local governments. Their scope of authority for particular environmental services was not examined.

Table 45. Summary of regulators and laws

Peru	Regulatory Framework
Main agencies	Ministry of Environment (MINAM); Organisation of Supervision and Environmental Assessment (OEFA); National Water Authority (ANA); General Bureau of Environmental Health (DIGESA)
Key laws	<i>General Environmental Law (Law 26811); Law on Solid Waste Management (Law 27314); Law on Land Transport of Hazardous Solid Waste and Hazardous Materials (Law 28256); General Law of Water and Sanitation Services (Law 26338)</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Peru's economy is open to environmental services at the central level. There are no restrictions on foreign investment. Peru does not apply economic needs tests to employment of foreign professionals, though as a general rule, foreign workers are restricted to 20 percent of a company's labour force and 30 percent of its payroll (subject to some exceptions).

Licensing and regulatory approvals apply for solid waste collection. Several sewerage companies remain state owned and operated.

Regulations applied by state authorities, and their impact on foreign providers, are not known. The list of measures presented below may therefore not be representative of the number and extent of regulation in the market.

Identified measures are summarised below.

Table 46. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	×		-
Restrictions on type of legal entity	×		-
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	Waste collection (942) - 1	1
Nationality requirements	✓	General (94) - 1	1
Controls on workers	✓	General (94) - 1	1
Professional qualification requirements	×		-
Government procurement restrictions	✓	General (94) - 1	1
Controls on use of land	✓	General (94) - 1	1
Local content requirements	✓	General (94) - 1	1
Existence of state owned enterprises	✓	Sewerage (941) - 1	1
Other	✓	General (94) - 1	1
TOTAL (Central and sub central)			8

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Peru has no specific commitments for liberalisation of environmental services in the WTO GATS, and maintains few horizontal restrictions consistent with the regulatory picture noted above.

Some of Peru's FTAs substantially improve on GATS outcomes. Peru has made full commitments on environmental services in its FTA with Canada on a negative list basis. In other FTAs, such as that with China, Peru has not made specific commitments on environmental services but the agreement builds on GATS outcomes through the inclusion of binding provisions for investment and temporary entry as well as disciplines to promote competition and improve transparency.

Table 47. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
Peru China Free Trade Agreement	×	Yes
Peru Canada Free Trade Agreement	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.15 THE PHILIPPINES

Regulatory framework

Regulatory authority for environmental services in the Philippines is shared between government at the central and sub central level, pursuant to the Constitution. The Department of Environment and Natural Resources (DENR) is the principal central agency tasked with implementing the Philippines' environmental policy. Its regulatory powers are delegated to regional offices throughout the economy's 13 administrative regions.

Aspects of environmental regulation not specifically allocated by law to national agencies fall within the jurisdiction of Local Government Units, that are subject to the supervision, control, and review of the DENR.

Table 48. Summary of regulators and laws

The Philippines	Regulatory Framework
Main agencies	Department of Environment and Natural Resources (DENR) and regional offices (PENRO); Metropolitan Waterworks and Sewerage System (MWSS); National Solid Waste Management Commission (NSWMC); Department of Health (DOH)
Key laws	<i>Philippine Environment Code, Presidential Decree No 1152 (1977); Ecological Solid Waste Management Act (RA 9003) 2000; Toxic Substances and Hazardous Waste Control Act (RA 6969) 1990; Clean Water Act (RA 9275) 2004; Department Administrative Order (DAO) No 10 (2005); Presidential Decree No. 856 (1975) Code on Sanitation, and Implementing Rules and Regulations</i>
Monitoring mechanisms in laws	Yes

Regulatory controls

There are numerous measures that restrict the participation of foreign services providers in the Philippines economy. For example, there are foreign equity limits on the operation and management of water and sewerage treatment; joint venture and local content requirements for procurement in infrastructure; nationality requirements for company directors, and; economic needs tests for the provision of services by foreign nationals. Price preferences and advantages are accorded to domestic suppliers in government procurement contracts, and preferential use of Filipino labour is often mandated.

Few other formal regulatory measures that discriminate against, or prevent foreign participation in environmental services specifically, were identified. Providers are subject to licensing and approval by various layers of government. Some controls on workers apply, such as requirements to employ certain qualified labour, and /or to undertake training of personnel by recognised institutions.

The government offers various tax incentives to encourage investment in waste disposal and recycling, some of which are conditional on the purchase of goods and equipment from domestic manufacturers.

The rules and regulations applied by municipal authorities, and their impact on foreign providers, are not known. The list of measures presented below may therefore understate the number and extent of measures present in the market.

Table 49. Summary of requirements by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 3	3
Restrictions on type of legal entity	✓	General (94) – 1; Sewerage (941) – 1	2
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 1; Sewerage (941) – 3; Waste collection (942) – 1; Waste treatment and disposal (943) – 4	9
Nationality requirements	✓	General (94) – 2	2
Controls on workers	✓	General (94) – 1; Sewerage (941) – 2; Waste treatment and disposal (943) – 2	5
Professional qualification requirements	✓	General (94) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	General (94) – 1; Waste treatment and disposal (943) – 1	2
Existence of state owned enterprises	×		-
Other	✓	Waste treatment and disposal (943) – 1	1
TOTAL (Central and sub central)			28

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

The Philippines has no specific commitments for environmental services in the WTO GATS. In its FTAs, the Philippines has committed to partial liberalisation of sewerage treatment under mode 3. Agreements also include provisions to promote competition and transparency in regulation. In both WTO and FTAs, horizontal restrictions reflect regulatory measures noted above.

Table 50. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	-
Japan Philippines Economic Partnership Agreement	✓	Yes
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.16 RUSSIA

Regulatory framework

Waste management in Russia is governed by multiple lines of responsibility. The Ministry of Natural Resources and Environment of the Russian federation (MNR) plays a central role in the administration of Russian environmental law. MNR has the right to issue environmental permits and to bring draft environmental laws and regulations before the State Duma. State policy at the regional level is carried out by the relevant Regional Duma and Regional Administration. Other entities (including housing management companies and individual tenants) have the right to enter into individual agreements with collection and haulage service providers for the provision of services.

Examination of measures other than at the central level was not technically feasible due to constraints on the availability of English language resources.

Table 51. Summary of regulators and laws

Russia	Regulatory Framework
Main agencies	Ministry of Natural Resources and Environment of the Russian Federation (MNR)
Key laws	<i>Federal Law No. 7-FZ, "On Environmental Protection"; Federal law no. 89-FZ "On production and consumption of waste"; Water Code of the Russian Federation no. 74-FZ</i>
Monitoring mechanisms in laws	Not clear

Regulatory measures

There are few controls which specifically limit environmental services at the central level; however sub central (state) entities of Russia have legislation regulating investment in their own territories. Rules vary by state. Whether they restrict foreign services providers is not known. The list of measures presented below may therefore not be representative of the number and extent of regulation in the market.

At the central level there are economy wide restrictions on foreign workers. Hiring of foreign labour is subject to allocated quotas based on foreign labour needs forecasts. There are limits on the number of intra corporate transfers by companies.

Foreign providers may also be disadvantaged by preferences accorded to domestic suppliers in government procurement contracts, though the extent to which such preferences are applied by Russian authorities is not clear.

Table 52. Summary of requirements by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	✓	Waste treatment and disposal (943) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1	3
Nationality requirements	×		-
Controls on workers	✓	General (94) – 4	4
Professional qualification requirements	×		-
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	✓	Sewerage (941) – 1	1
Other	×		-
TOTAL (Central and sub central)			13

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

In the WTO GATS, Russia has specific commitments on environmental services in modes 1 and 3. Mode 1 commitments are limited to environmental impact assessment services and consultancy/advisory services. For mode 3, the market is open to refuse disposal services, subject to a commercial presence requirement for hazardous wastes.

Russia has no FTAs with APEC economies.

Table 53. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.17 SINGAPORE

Regulatory framework

Environmental services are regulated by central government agencies. The Ministry of the Environment and Water Resources is the primary governmental agency that deals with environmental matters, together with its two statutory boards – the Public Utilities Board and the National Environment Agency (and its various departments).

Table 54. Summary of regulators and laws

Singapore	Regulatory framework
Main agencies	Ministry of the Environment and Water Resources (Public Utilities Board; National Environment Agency)
Key laws	<i>Environmental Public Health Act 2002</i> (and Regulations); <i>Sewerage and Drainage Act 2001</i> (and Regulations); <i>Environmental Protection and Management Act 2002</i> (and Regulations);
Monitoring mechanisms in laws	Yes

Regulatory measures

There are few restrictions on foreign participation in Singapore. Some economy-wide requirements apply to foreign investments and to the employment of foreign workers. Nationality/residency requirements exist for establishment and business registration.

Licensing is required for some environmental services operators, though requirements tend to be transparent and not onerous. There is no discrimination against foreign operators. Private sector participation in environmental services is allowed.

Regulatory measures identified are summarised by type and by service below.

Table 55. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 1	1
Restrictions on type of legal entity	×		-
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	General (94) – 1; Sewerage (941) – 1; Waste collection (942) – 3; Waste treatment and disposal (943) – 1; Sanitation (945) – 1	7
Nationality requirements	✓	General (94) – 1	1
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	✓	Waste collection (942) – 1; Sanitation (945) – 1	2
Government procurement restrictions	×		-
Controls on use of land	×		-
Local content requirements	×		-
Existence of state owned enterprises	✓	Waste treatment and disposal (943) – 1	1
Other	×		-
TOTAL			13

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Singapore has made liberalisation commitments on environmental services in its FTAs across modes 1, 2 and 3. The FTAs examined also build on liberalisation in the GATS to the extent that they include related disciplines to improve transparency and anti-competitive behaviour.

Table 56. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	×	–
Singapore-Australia FTA (SAFTA)	✓	Yes
Korea-Singapore FTA (KSFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.18 CHINESE TAIPEI

Regulatory framework

The Environmental Protection Administration of the Executive Yuan is the only agency charged with protecting the environment economy-wide. It is responsible for developing environmental standards, drafting legislation and coordinating action among the other various agencies of government at central, provincial and local levels. Local governments are authorised to draft autonomous laws and regulations and environmental protection plans and to promote and implement such laws and regulations and plans.

Table 57. Summary of regulators and laws

Chinese Taipei	Regulatory Framework
Main agencies	Environmental Protection Administration (EPA); Ministry of Interior (MOI)
Key laws	<i>Basic Environment Act 2002; Waste Disposal Act 1974 (Amended 2013) 2013 and Rules and Regulations; Water Pollution Control Act 1974 (Amended 2015) and Rules and Regulations; Sewerage Law 2007; Air Pollution Control Act 1975 (Amended2012); Toxic Chemical Substances Control Act 1986 (Amended 2013); Environmental Impact Assessment Act 1994 (Amended 2003)</i>
Monitoring mechanisms in laws	Yes

Regulatory controls

There are few regulatory controls on environmental services at the central level. The main measures facing foreign providers are various licensing and approval requirements that apply to waste disposal and treatment activities. In some cases enterprises must employ technical and qualified personnel.

There are general (economy wide) restrictions on hiring of foreign personnel. Investment through commercial presence requires advance approval from the authorities. Chinese Taipei is a member of the WTO Agreement on Government Procurement, but retains a right to apply preferential treatment to domestic suppliers.

Requirements are mandated at the central level but are implemented and managed at the municipal/county/city (sub central) level through various regulations. Laws do not discriminate between foreign and domestic providers, though how they are applied in practice is not clear.

The government encourages investment in recycling. Subsidies are available to waste recycling, clearance and disposal enterprises.

Identified measures are summarised by type and by service below.

Table 58. Summary of measure by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 2;	2
Restrictions on type of legal entity	✓	Waste treatment and disposal (943) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	Sewerage (941) – 1; Waste collection (942) – 2; Waste treatment and disposal (943) – 5; Other (949) – 3	11
Nationality requirements	×		-
Controls on workers	✓	General (94) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) – 3	6
Professional qualification requirements	✓	Sewerage (941) – 1; Waste treatment and disposal (943) – 2; Other (949) – 1	4
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		-
Existence of state owned enterprises	?		-
Other	✓	General (94) – 1	1
TOTAL (Central and sub central)			27

Key: × indicates no restrictions ✓ indicates restrictions exist ? indicates existence of restrictions unclear

Liberalisation in trade agreements

Chinese Taipei has liberal commitments for environmental services in the WTO GATS covering sewage, refuse disposal and sanitation services. Modes 1-3 are generally open. Horizontal limitations are maintained for mode 4. Chinese Taipei has made full commitments (no restrictions) for consulting services incidental to nature and landscape protection.

Chinese Taipei has few FTAs, but those which it has negotiated are ‘GATS +’: both ANZTEC and ASTEP include full commitments (no restrictions) for environmental services.

Table 59. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu on Economic Cooperation (ANZTEC)	✓	Yes
Agreement between Singapore and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu on Economic Partnership (ASTEP)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.19 THAILAND

Regulatory framework

Environmental services are regulated centrally by the Ministry of Natural Resources and Environment (MONRE) and its various departments. MONRE's provincial offices formulate environmental management plans and monitor and enforce environmental regulations. Local administrations hold the authority for licensing of private solid waste operators and for prescribing rules, procedure, and conditions governing waste management within their localities. The Department of Industrial Works is directly responsible for the management of hazardous wastes generated from industries.

Table 60. Summary of regulators and laws

Thailand	Regulatory Framework
Main agencies	Ministry of Natural Resources and Environment (MONRE) and its Departments; Provincial Offices for Natural Resources and Environment (PONRE); Wastewater Management Authority; Department of Industrial Works (DIW); National Environmental Board (NEB)
Key laws	<i>Enhancement and Conservation of National Environment Quality Act B.E.2535 (NEQA); Public Health Act B.E. 2535; Hazardous Substances Act B.E. 2535</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Thailand maintains numerous regulatory measures which restrict foreign participation in environmental services. For example:

- Investment in environmental services is subject to a 49% foreign equity cap and businesses must meet nationality requirements for boards of directors. There are controls on foreign land ownership;
- All environmental services are subject to licensing and approval requirements. There appears to be discretion for policy makers to apply economic needs tests and local content considerations in the award of licences;
- There are controls on foreign workers. Work permits are limited to certain categories of personnel and are restricted based on the employer, the locality and size of investment, and the employment of Thai workers.
- In order to be eligible for government procurement contracts, service providers are required to form joint ventures with Thai firms and hire a specified percentage of Thai nationals.

The number and nature of requirements identified (see below) is likely under stated given that applicable regulation at the sub central level was not reviewed.

Table 61. Summary of requirements by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	✓	General (94) – 2; Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1; Sanitation (945) – 1; Remediation (944) – 1	7
Restrictions on type of legal entity	✓	General (94) – 1	1
Restrictions on scope of service	×		-
Economic needs tests	✓	General (94) – 2	2
Licensing and approval procedures	✓	General (94) – 3; Sewerage (941) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1	6
Nationality requirements	✓	General (94) – 2	2
Controls on workers	✓	General (94) – 1	1
Professional qualification requirements	✓	General (94) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	General (94) – 1	1
Existence of state owned enterprises	✓	Sewerage (941) - 1	1
Other	×		-
TOTAL (Central and sub central)			24

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Thailand has partial commitments for liberalisation of environmental services in the GATS, though these are subject to horizontal restrictions for modes 3 and 4. Commitments in some FTAs vary – some build on these commitments (e.g.: AANZFTA removes the 49% equity limitation on investment), but not all (e.g.: ASEAN Korea FTA reflects GATS commitments). Most FTAs include additional provisions to facilitate greater transparency and competition in the market.

Table 62. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	✓	Yes
ASEAN Korea Free Trade Agreement (AKFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.20 UNITED STATES OF AMERICA

Regulatory framework

There is overlapping authority between federal and state agencies for administering and enforcing environmental laws in the United States (US). The US Environmental Protection Agency (EPA) is the lead federal agency for implementing most of the national environmental statutes. Each state has at least one agency with responsibility for administering laws related to environmental services.

The EPA has 10 regional offices which are geographically defined. EPA Region 9 serves Arizona, California, Hawaii, Nevada and the Pacific Islands. California was selected for examination of regulatory requirements at the sub central level as a representative US state.

Table 63. Summary of regulators and laws

United States (California)	Regulatory framework
Main agencies	US Environmental Protection Agency (EPA) and its Offices; CalRecycle (California Department of Resources Recycling and Recovery)
Key laws	<i>California Code of Regulations</i> (Title 14, Division 2 , and Title 27, Division 2 and 7); <i>California Water Code</i> (Section 13523);
Monitoring mechanisms in laws	Yes

Regulatory measures

The US economy is open at the central level. There are very few restrictions on foreign services providers and investors and none specific to environmental services.

State laws impose their own requirements, which may, as in California, be more stringent than those at the central (federal) level. They include:

- Numerous permits, licenses and approvals for investment, establishment and operation, including documentation and reporting obligations;
- Controls on land acquisition;
- Preferential loans and grants for government enterprises and local research institutions;
- Qualification and training requirements for some environmental service workers.

Measures identified at the federal level and in California can be characterised as non - discriminatory, public interest regulations, rather than formal restrictions on trade. Other states may have differing laws and regulations.

Measures identified are summarised by type and by service below.

Table 64. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measures	Total no.
Limits on foreign investment	×		-
Restrictions on type of legal entity	×		-
Restrictions on scope of service	×		-
Economic needs tests	×		-
Licensing and approval procedures	✓	Sewerage (941) – 1; Waste collection (942) – 6; Waste treatment and disposal (943) – 4	11
Nationality requirements	×		-
Controls on workers	✓	General (94) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1	3
Professional qualification requirements	✓	Waste collection (942) – 1	1
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	×		
Existence of state owned enterprises	×		
Other	✓	General (94) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 1; Remediation (944) – 1	4
TOTAL (Central and sub central)			21

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

The openness of the US economy at the central level is reflected in liberal commitments on environmental services in both the WTO and in free trade agreements. The market is open, subject to horizontal controls on movement of natural persons (mode 4). Measures at the sub central (regional) level are excluded – the US has generally not been bound by GATS or FTA commitments and retains rights to impose a range of restrictions on foreign services providers and investors.

Table 65. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	–
United States Korea Free Trade Agreement (KORUS)	✓	Yes
Australia United States Free Trade Agreement (AUSFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

4.21 VIET NAM

Regulatory framework

Regulatory authority for environmental services is spread across several central government agencies. The Ministry of Natural Resources and Environment and the Ministry of Construction assume responsibility for environmental protection and for solid waste management, respectively. Provincial People's Committees (PPCs) for each municipality directly exercise administrative environmental management functions under the national government. Provincial departments of the Ministries are delegated as agents in each municipality, operating under the PPC.

Table 66. Summary of regulators and laws

Viet Nam	Regulatory Framework
Main agencies	Ministry of Natural Resources and Environment; Vietnam Environment Administration (and Provincial Departments); Ministry of Construction (and Provincial Departments) ; Provincial People's Committees
Key laws	<i>Law on Environment Protection No. 55/2014/QH13; Decree No. 80/2014/ND-CP on drainage, sewerage and wastewater treatment; Decree 59/2007/ND-CP of the Government on Management of Solid Wastes</i>
Monitoring mechanisms in laws	Yes

Regulatory measures

Environmental services are generally open to foreign providers, though investment is constrained by a range of controls that apply across the economy. Foreign investors are subject to discriminatory licensing and procedures when establishing companies or changing business activities. Nationality requirements, economic needs tests and requirements to train local workers affect the employment of foreign workers. Preferences for local providers and locally produced goods apply in government procurement tendering. Foreigners are not permitted to own land.

Aside from these requirements, the market for environmental services is formally open – the government encourages foreign investment in environmental protection services, including sewerage and wastewater management, through various incentives.

However, access is undermined by controls on the form of investment. Companies typically do not own or control their assets, but provide services under contracts with state entities to build and operate their facilities. Service supply (e.g.: in wastewater and sewerage) is subject to multiple administrative approvals and permits at the provincial level which although do not discriminate against foreigners, can be inconsistent and non transparent.

Table 67. Summary of measures by type of control

Type of measure	Applies	Environmental service (CPC code) and number of measure	Total no.
Limits on foreign investment	✓	General (94) – 1; Sewerage (941) – 2; Waste collection (942) – 1; Waste treatment and disposal (943) – 1	5
Restrictions on type of legal entity	✓	Sewerage (941) – 3; Waste collection (942) – 2; Waste treatment and disposal (943) – 1	6
Restrictions on scope of service	✓	Sewerage (941) – 1; Waste collection (942) – 2; Waste treatment and disposal (943) – 1	4
Economic needs tests	✓	General (94) – 1	1
Licensing and approval procedures	✓	General (94) – 2; Sewerage (941) – 1; Waste collection (942) – 2; Waste treatment and disposal (943) – 3; Remediation (944) – 1; Other (949) – 1	10
Nationality requirements	×		-
Controls on workers	✓	General (94) – 3; Waste treatment and disposal (943) – 1	4
Professional qualification requirements	✓	General (94) – 1; Waste collection (942) – 1; Waste treatment and disposal (943) – 2; Other (949) – 1	5
Government procurement restrictions	✓	General (94) – 1	1
Controls on use of land	✓	General (94) – 1	1
Local content requirements	✓	General (94) – 1	1
Existence of state owned enterprises	✓	General (94) – 1; Sewerage (941) – 1; Waste collection (942) – 1	3
Other	✓	General (94) – 3; Sewerage (941) – 1	4
TOTAL (Central and sub central)			45

Key: × indicates no restrictions ✓ indicates restrictions exist

Liberalisation in trade agreements

Viet Nam has made partial commitments in environmental services in modes 2 and 3 in the GATS and maintains horizontal restrictions on mode 4. Liberalisation commitments in FTAs examined do not extend beyond GATS commitments. FTAs improve on GATS outcomes through the inclusion of related disciplines which seek to improve transparency and competitiveness in the market.

Table 68. Summary of liberalisation in trade agreements

Trade Agreement	Liberalisation of environmental services	GATS +
WTO General Agreement on Trade in Services (GATS)	✓	-
ASEAN Australia New Zealand Free Trade Agreement (AANZFTA)	✓	Yes
ASEAN Korea Free Trade Agreement (AKFTA)	✓	Yes

✓ indicates specific commitments on environmental services (positive list agreements) or absence of restrictions (negative list agreements) × indicates no commitments

5. CONCLUSIONS AND NEXT STEPS

This report presents an initial overview of regulatory measures for environmental services in APEC economies. Despite considerable variations across the member economies, some trends are apparent:

- In most APEC economies, environmental services are regulated by multiple agencies at both central and sub central levels, and local government authorities play a major role in administration of most environmental services within their respective jurisdiction.
- Licensing and approval procedures are the predominant type of control across the region. While these measures tend not to restrict trade per se, the multiplicity and complexity of requirements can impede it, particularly where approval procedures are open to administrative discretion or are lacking in transparency.
- The majority of measures affect the operation of firms in foreign markets and about one quarter the establishment of a commercial presence. Almost 10 percent impact on the ability of business persons or professionals to deliver services.
- While not all economies have committed to market opening of environmental services in the WTO GATS, all have improved on WTO liberalisation outcomes in subsequent FTAs.

The environmental services examined for this survey (CPC94) could be expanded to include a wider range of environmental services or complementary services which impact on business delivering environmental services in foreign markets. In addition to measures which directly regulate environmental services, foreign providers face measures arising from the various ‘incidental’ services (such as planning, construction, engineering and technical personnel) which are involved in establishing a commercial presence, that impact on operation in the market or that control the ability of persons to work or deliver these services. Broadening the scope of services covered would contribute to a more complete picture of the regulatory measures in place.

In many economies, applicable measures at the sub central level were not fully investigated, mainly due to time and resource constraints. APEC economies may benefit from further work to examine their extent and breadth. This would complement the results of the survey, and provide economies with a more informed picture upon which to explore further action. A further issue for consideration is how APEC governments are best placed to address the substantial reach of regulatory control at this (state and local) level.

ANNEXES

1. LIST OF ENVIRONMENTAL SERVICES COVERED (CPC 4 VERSION 2.1)

Section: 9 - Community, social and personal services

Division 94 - Sewage and waste collection, treatment and disposal and other environmental protection services

941 Sewerage, sewage treatment and septic tank cleaning services

9411 Sewerage and sewage treatment services

94110 Sewerage and sewage treatment services

This subclass includes:

- sewage removal services usually provided using equipment such as waste pipes, sewers or drains,
- sewage treatment services using dilution, screening and filtering, sedimentation, chemical precipitation, etc.

This subclass does not include:

- collection or purification of water, cf. 18000
- construction, repair and alteration of sewers and sewer pipelines, cf. 54241, 54251,
- distribution of water through mains on own account, cf. 69210,
- distribution of water through mains on a fee or contract basis, cf. 86330.

9412 Septic tank emptying and cleaning services

94120 Septic tank emptying and cleaning services

This subclass includes:

- emptying and cleaning of cesspools and septic tanks,
- servicing of chemical toilets.

942 Waste collection services

9421 Collection services of hazardous waste

94211 Collection services of hazardous medical and other biohazardous waste

This subclass includes: waste collection specifically designed for the collection of: pathological wastes such as anatomical wastes, non-anatomical wastes, sharp wastes, such as syringes and scalpels; other biological-infectious wastes from hospitals, medical practices, dental practices, medical laboratories; other biohazardous wastes from non-residential locations.

94212 Collection services of industrial hazardous waste (except medical and other biohazardous waste)

This subclass includes:

- waste collection from industrial locations specifically designed for the collection of: hazardous wastes (except medical and biological) including materials that may be hazardous to human health or the environment and that require special handling techniques specified by legislation or regulation.

94219 Collection services of other hazardous waste

This subclass includes:

- waste collection from non-industrial locations specifically designed for the collection of: hazardous waste including materials that may be hazardous to human health or the environment that require special handling techniques specified by legislation or regulation.

<p>9422 Collection services of non-hazardous recyclable materials</p>	<p>94221 Collection services of non-hazardous recyclable materials, residential This subclass includes: waste collection specifically designed for the collection of non-hazardous recyclable materials: whether presorted or commingled waste, such as cardboard, paper, plastic, glass, aluminium, steel and organic yard waste from residential locations, including curbside collection, back door collection or automated collection on a flexible or regular schedule.</p> <p>94229 Collection services of non-hazardous recyclable materials, other This subclass includes: waste collection specifically designed for the collection of non-hazardous recyclable materials: whether presorted or commingled, such as cardboard, paper, plastic, glass, aluminium, steel, and other recyclable materials from non-residential locations, on a regular or flexible schedule.</p>
<p>9423 General waste collection services</p>	<p>94231 General waste collection services, residential This subclass includes: general collection of waste, garbage, rubbish, refuse, trash, and commingled materials from residential locations, including curbside collection, back door collection, or automated collection on a flexible or regular schedule</p> <p>94239 General waste collection services, other This subclass includes: general collection of waste, garbage, rubbish, refuse, trash, and commingled materials from non-residential locations, on a regular or flexible schedule.</p>
<p>943 Waste treatment and disposal services</p>	
<p>9431 Waste preparation, consolidation and storage services</p>	<p>94311 Hazardous waste preparation, consolidation and storage services This subclass includes: - consolidation, temporary storage, and preparation of hazardous waste - consolidation and preparation of hazardous waste for transportation to an appropriate facility that processes waste - services of drop-off centres, transfer stations and container stations</p> <p>94312 Ship-breaking and other dismantling of wrecks services This subclass includes: - ship-breaking, - dismantling of wrecks, such as cars, computers etc., in order to obtain and separate recoverable materials. This subclass does not include: dismantling of wrecks, such as cars etc., to obtain items for sale, cf. corresponding subclass in division 61 or 62</p> <p>94313 Non-hazardous recyclable materials preparation, consolidation and storage services This subclass includes: - consolidation, temporary storage and preparation of non-hazardous recyclable materials - transfer facility services of non-hazardous recyclable materials - recovery and preparation of non-hazardous recyclable materials, such as bailing, cleaning, sorting, volume reduction and similar preparation and consolidation of recyclable materials, for transportation to an appropriate facility that processes recyclable materials.</p> <p>94319 Other non-hazardous waste preparation, consolidation and storage services This subclass includes: - consolidation, temporary storage and preparation of non-hazardous waste, - transfer facility services for non-hazardous waste, - consolidation and preparation of non-hazardous waste for transportation to an appropriate facility that processes waste.</p>

<p>9432 Hazardous waste treatment and disposal services</p>	<p>94321 Hazardous waste treatment services This subclass includes: treatment to reduce, eliminate, or transform hazardous waste. Processes include biological, chemical, and/or physical procedures or incineration. These procedures may lead to a disposable residual or result in the recovery of a recyclable material.</p> <p>94322 Hazardous waste disposal services This subclass includes: disposal services for hazardous waste at a facility that meets legal standards for the disposal of hazardous waste, such as at approved controlled containment facilities or landfills</p>
<p>9433 Non-hazardous waste treatment and disposal services</p>	<p>94331 Sanitary landfill services, non-hazardous waste This subclass includes: disposal of non-hazardous waste on or in a sanitary landfill which meets the sanitary landfill criteria specified by legislation or regulation, i.e. designed to prevent leaking etc.</p> <p>94332 Other landfill services, non-hazardous waste This subclass includes: disposal of non-hazardous waste on or in landfills other than a sanitary one.</p> <p>94333 Incineration of non-hazardous waste This subclass includes: incineration of non-hazardous waste in a facility that meets legal standard and requirements for incineration of non-hazardous waste.</p> <p>94339 Other non-hazardous waste treatment and disposal services This subclass includes: other non-hazardous waste disposal services, such as: services of chemical or biological reduction of agricultural waste and similar treatment services.</p>
<p>945 Sanitation and similar services</p>	
<p>9451 Sweeping and snow removal services</p>	<p>94510 Sweeping and snow removal services This subclass includes:</p> <ul style="list-style-type: none"> - street sweeping and cleaning services - gritting and salting of roads - snow ploughing and removal - runway sweeping and snow removal services - runway vacuuming services
<p>9459 Other sanitation services</p>	<p>94590 Other sanitation services This subclass includes:</p> <ul style="list-style-type: none"> - beach cleaning services - drain unblocking services. <p>This subclass does not include:</p> <ul style="list-style-type: none"> - disinfection and extermination services for buildings and other non-agricultural structures, cf. 85310 - pest control services in connection with agriculture, cf. 86119
<p>944 Remediation services³</p>	<p>This group includes remediation services, i.e. services dealing with the effects of contamination caused by operation of facilities or by accidents. These services</p>

³ CPC 9404, 9406 and 9409 would seem to be covered, at least partly, under CPC 2 944 (remediation services). This includes: **9404 Cleaning services of exhaust gases:** Emission monitoring and control services of pollutants into the air, whether from mobile or stationary sources, mostly caused by the burning of fossil fuels. Concentration monitoring, control and reduction services of pollutants in ambient air, especially in urban areas. **9405 Noise abatement services:** Noise pollution monitoring, control and abatement services, e.g. traffic-related noise abatement services in urban areas. **9406 Nature and landscape protection services:** Ecological system protection services, e.g. of lakes, coastlines and coastal waters, dryland, etc., including their respective fauna, flora and habitats. Services consisting in studies on the interrelationship between environment and climate (e.g. greenhouse effect), including natural disaster assessment and abatement services. Landscape protection services not elsewhere

	aim to eliminate or contain any existing contamination of the soil, water or air and have to be performed on site.
9441 Site remediation and clean-up services	<p>94411 Site remediation and clean-up services, air This subclass includes: services involved in implementing approved plans for the remediation of air on a contaminated site that meet requirements specified by legislation or regulation.</p> <p>94412 Site remediation and clean-up services, surface water This subclass includes:</p> <ul style="list-style-type: none"> - services involved in implementing approved plans for the remediation of surface water on a contaminated site, that meet requirements specified by legislation or regulation. <p>94413 Site remediation and clean-up services, soil and groundwater This subclass includes: services involved in implementing approved plans for the remediation of soil and groundwater on a contaminated site that meet requirements specified by legislation or regulation.</p>
9442 Containment, control and monitoring services and other site remediation services n.e.c.	<p>94420 Containment, control and monitoring services and other site remediation services n.e.c. This subclass includes:</p> <ul style="list-style-type: none"> - services involved in preventing additional or wider contamination on the site, - preventing the movement of uncontrolled contaminants from the site, - monitoring the site to determine the effectiveness of remediation activities - controlling access to the contaminated site - other site remediation services, n.e.c.
9443 Building remediation services	94430 Building remediation services This subclass includes: development and implementation of a remediation plan that removes, destroys, contains or otherwise reduces contaminants in buildings, such as asbestos, lead, radon etc
9449 Other remediation services n.e.c.	<p>94490 Other remediation services n.e.c. This subclass includes:</p> <ul style="list-style-type: none"> - environmental emergency response services, - other remediation services, n.e.c.
949 Other environmental protection services n.e.c.	
9490 Other environmental protection services n.e.c.	<p>94900 Other environmental protection services n.e.c. This subclass includes:</p> <ul style="list-style-type: none"> - acidifying deposition (i.e., acid rain) monitoring, controlling and damage assessment services, - other environmental protection services not elsewhere classified.

classified. Exclusion: Forest and damage assessment and abatement services are classified in group 881 (Services incidental to agriculture, hunting and forestry).

2. LIST OF FTAS EXAMINED

Economy	FTAs examined	Reference
Australia	<ul style="list-style-type: none"> Malaysia-Australia Free Trade agreement (MAFTA) 	Text of the Malaysia - Australia Free Trade Agreement, accessed March 2016 at http://fta.miti.gov.my/index.php/pages/view/Malaysia-Australia?mid=42
	<ul style="list-style-type: none"> China-Australia Free Trade Agreement (ChAFTA) 	Text of the China - Australia Free Trade Agreement, accessed at http://dfat.gov.au/trade/agreements/chafta/official-documents/Pages/official-documents.aspx
Brunei Darussalam	<ul style="list-style-type: none"> ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) 	Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at http://dfat.gov.au/trade/agreements/aanzfta/official-documents/Pages/agreement-establishing-the-asean-australia-new-zealand-free-trade-area-aanzfta.aspx
	<ul style="list-style-type: none"> Japan-Brunei Darussalam Economic Partnership Agreement 	Text of the Agreement between Japan and Brunei Darussalam for an Economic Partnership, accessed at http://www.mofa.go.jp/region/asia-paci/brunei/epa0706/agreement.pdf
Canada	<ul style="list-style-type: none"> Canada-Korea Free Trade Agreement (CKFTA) 	Text of the Canada - Korea Free Trade Agreement, accessed at http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/korea-coree/toc-tdm.aspx?lang=eng
	<ul style="list-style-type: none"> Canada-Chile Free Trade Agreement 	Text of the Canada - Chile Free Trade Agreement, accessed at http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/chile-chili/menu.aspx?lang=en
Chile	<ul style="list-style-type: none"> United States-Chile Free Trade Agreement 	Text of the United States - Chile Free Trade Agreement, accessed April 2016 at: https://ustr.gov/trade-agreements/free-trade-agreements/chile-fta/final-text
	<ul style="list-style-type: none"> Australia-Chile Free Trade Agreement 	Text of Australia - Chile Free Trade Agreement, accessed April 2016 at: http://dfat.gov.au/trade/agreements/acfta/Documents/Australia-Chile-Free-Trade-Agreement.pdf
China	<ul style="list-style-type: none"> China-Australia Free Trade Agreement (ChAFTA) 	Text of the China - Australia Free Trade Agreement, accessed at http://fta.mofcom.gov.cn/topic/enaustralia.shtml
	<ul style="list-style-type: none"> China-ASEAN Free Trade Agreement 	Text of the Agreement on Trade in Services of the Framework Agreement on Comprehensive Economic Co-operation between China and ASEAN, accessed at http://fta.mofcom.gov.cn/topic/chinaasean.shtml

Hong Kong, China	<ul style="list-style-type: none"> Hong Kong, China - New Zealand Closer Economic Partnership Agreement Free Trade Agreement between Hong Kong, China and Chile 	<p>Text of the Hong Kong, China - New Zealand Closer Economic Partnership Agreement accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/Hong-Kong-FTA/NZ-HK-CEP.pdf; and http://www.tid.gov.hk/english/ita/fta/hknzcep/text_agreement.html</p> <p>Text of the Hong Kong, China and Chile Free Trade Agreement accessed at https://www.tid.gov.hk/english/ita/fta/hkclfta/text_agreement.html</p>
Indonesia	<ul style="list-style-type: none"> ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) ASEAN-Korea Free Trade Agreement (AKFTA) 	<p>Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/AANZFTA-ASEAN/Agreement-Establishing-the-ASEAN-Australia-New-Zealand-Free-Trade-Area-1.pdf</p> <p>Text of the Agreement On Trade In Services Under The Framework Agreement On Comprehensive Economic Cooperation Among The Governments Of The Member Countries Of The Association Of Southeast Asian Nations And The Republic Of Korea, accessed February 2016 at http://akfta.asean.org/uploads/docs/agreements/Services-full-text.pdf</p>
Japan	<ul style="list-style-type: none"> Japan-Australia Free Trade Agreement (JAEPA) Japan-Mexico Economic Partnership Agreement 	<p>Text of the Japan - Australia Free Trade Agreement accessed at http://dfat.gov.au/trade/agreements/jaepa/official-documents/Pages/official-documents.aspx</p> <p>Text of the Japan - Mexico Economic Partnership Agreement accessed at http://www.mofa.go.jp/region/latin/mexico/agreement/index.html</p>
Korea	<ul style="list-style-type: none"> Korea-United States Free Trade Agreement (KORUS) Korea-Australia Free Trade Agreement (KAFTA) 	<p>Text of the Korea - United States Free Trade Agreement, accessed Feb 2016 at https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text</p> <p>Text of the Korea - Australia Free Trade Agreement, accessed at http://dfat.gov.au/trade/agreements/kafta/official-documents/Pages/default.aspx</p>
Malaysia	<ul style="list-style-type: none"> Malaysia-Australia Free Trade Agreement Malaysia-New Zealand Free Trade Agreement 	<p>Text of the Malaysia - Australia Free Trade Agreement, accessed March 2016 at http://fta.miti.gov.my/index.php/pages/view/Malaysia-Australia?mid=42</p> <p>Text of the Malaysia - New Zealand Free Trade Agreement, accessed March 2016 at http://fta.miti.gov.my/index.php/dl/516d6c734c5535344c7a45755830314f576b5a55515639685a334a6c5a57316c626e52664c6d527659773d3d</p>

Mexico	<ul style="list-style-type: none"> Economic Partnership, Political Coordination and Cooperation Agreement between the European Community and its Member States, and Mexico 	Text of the Economic Partnership, Political Coordination and Cooperation Agreement between the European Community and its Member States, and the United Mexican States, accessed at http://www.sice.oas.org/Trade/MEX_EU/English/index_e.asp#PDF
	<ul style="list-style-type: none"> Mexico-Japan Economic Partnership Agreement 	Text of the Japan - Mexico Economic Partnership Agreement accessed at http://www.mofa.go.jp/region/latin/mexico/agreement/index.html
New Zealand	<ul style="list-style-type: none"> ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) 	Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/AANZFTA-ASEAN/Agreement-Establishing-the-ASEAN-Australia-New-Zealand-Free-Trade-Area-1.pdf
	<ul style="list-style-type: none"> New Zealand-Korea Free Trade Agreement 	Text of the Korea - New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/nz-korea-free-trade-agreement/text-of-the-new-zealand-korea-fta-agreement/
Papua New Guinea	PNG has not concluded FTAs which include liberalisation commitments on trade in services.	
Peru	<ul style="list-style-type: none"> Peru-China Free Trade Agreement 	Text of the Peru - China Free Trade Agreement accessed at: http://fta.mofcom.gov.cn/topic/enperu.shtml
	<ul style="list-style-type: none"> Peru-Canada Free Trade Agreement 	Text of Canada - Peru Free Trade Agreement accessed at: http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/peru-perou/peru-toc-perou-tdm.aspx?lang=eng
The Philippines	<ul style="list-style-type: none"> Japan-Philippines Economic Partnership Agreement 	Text of the Japan - Philippines Economic Partnership Agreement accessed at http://www.mofa.go.jp/region/asia-paci/philippine/epa0609/main.pdf
	<ul style="list-style-type: none"> ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) 	Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/AANZFTA-ASEAN/Agreement-Establishing-the-ASEAN-Australia-New-Zealand-Free-Trade-Area-1.pdf
Russia	Russia has no FTAs which include liberalisation commitments on trade in services, or with APEC economies.	

Singapore	<ul style="list-style-type: none"> • Singapore-Australia FTA (SAFTA) • Korea-Singapore FTA (KSFTA) 	<p>Text of the Singapore - Australia Free Trade Agreement, accessed at http://www.iesingapore.gov.sg/~media/IE%20Singapore/Files/FTA/Existing%20FTA/Singapore%20Australia%20FTA/Legal%20Text/SingaporeAustralia20FTA20Legal20Text.pdf</p> <p>Text of the Korea - Singapore Free Trade Agreement, accessed at http://www.iesingapore.gov.sg/~media/IE%20Singapore/Files/FTA/Existing%20FTA/Korea%20Singapore%20FTA/Legal%20Text/KSFTA20Legal20Text1.pdf, although horizontal restrictions remain for mode 4</p>
Chinese Taipei	<ul style="list-style-type: none"> • Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu on Economic Cooperation (ANZTEC) • Agreement between Singapore and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu on Economic Partnership (ASTEP) 	<p>Text of ANZTEC accessed at http://www.nzcio.com/webfm_send/59</p> <p>Text of the ASTEP accessed at http://www.iesingapore.gov.sg/Trade-From-Singapore/ASTEP/Legal-Text</p>
Thailand	<ul style="list-style-type: none"> • ASEAN-Korea Free Trade Agreement (AKFTA) • ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) 	<p>Text of the ASEAN - Korea Free Trade Agreement, accessed at http://akfta.asean.org/index.php?page=agreement-on-trade-in-services-under-the-framework-agreement</p> <p>Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/AANZFTA-ASEAN/Agreement-Establishing-the-ASEAN-Australia-New-Zealand-Free-Trade-Area-1.pdf</p>
United States	<ul style="list-style-type: none"> • Korea-United States Free Trade Agreement (KORUS) • Australia-United States Free Trade Agreement (AUSFTA) 	<p>Text of the Korea - United States Free Trade Agreement, accessed at https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text</p> <p>Text of the Australia - United States Free Trade Agreement accessed at https://ustr.gov/trade-agreements/free-trade-agreements/australian-fta/final-text</p>
Viet Nam	<ul style="list-style-type: none"> • ASEAN Australia New Zealand Free Trade Agreement (AANZFTA) 	<p>Text of the ASEAN Australia New Zealand Free Trade Agreement, accessed at https://www.mfat.govt.nz/assets/_securedfiles/FTAs-agreements-in-force/AANZFTA-ASEAN/Agreement-Establishing-the-ASEAN-Australia-New-Zealand-Free-Trade-Area-1.pdf</p>

- ASEAN-Korea Free Trade Agreement (AKFTA)

Text of the Agreement On Trade In Services Under The Framework Agreement On Comprehensive Economic Cooperation Among The Governments Of The Member Countries Of The Association Of Southeast Asian Nations And The Republic Of Korea, accessed Feb 2016 at <http://akfta.asean.org/uploads/docs/agreements/Services-full-text.pdf>

3. INVENTORY OF REGULATORY MEASURES FOR ENVIRONMENTAL SERVICES - ECONOMY REPORTS

(21 separate documents in excel)