

The International Trade in Environmental Services

Barriers to trade and recent approaches to liberalisation



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Foreword

The City of London Corporation is dedicated to supporting a vibrant and thriving Square Mile as part of a globally successful and sustainability-focused UK. How the UK develops its approach to international trade will play a major role in this success.

Services provide the glue which keeps the international trading system functioning. Without appropriate services - from the ship which transports the goods, to the bank which provides the financing - international trade would not be possible.

Recent research (beyond the present study) has illustrated the extensive and growing importance of the UK financial and professional services ecosystem as a vital enabler of international trade. These trends highlight a need for greater understanding of the role and impact of services in the international trading landscape.

As the world becomes more interconnected, trade and sustainability are increasingly overlapping policy areas. Supporting the journey to net zero will require deeper understanding of this interconnectivity.

To date, national and international efforts at harnessing the power of trade in support of sustainability objectives have focused largely on trade in 'environmental goods'. This includes lowering tariff barriers for environmentally related products and attempts to expand definitions. Trade in environmental services – services which are in some way environmentally related – is less well understood.

This report, which we have commissioned from KPMG, provides an overview of the current international structures surrounding environmental services. It highlights the important role environmental services play in supporting the trade in environmental goods, suggesting that the true scale and impact of environmental services may be greater than captured by traditional definitions and official statistics.

The report also outlines the current challenges facing environmental services trade and policymaking in this space. This includes the limited reach of definitions and metrics, stalled multilateral negotiations, and regulatory barriers to trade in services.

Increasing our knowledge of environmental services is crucial to better understanding the international economy. As research in this space remains limited, the City of London Corporation's ambition for this report is to prompt further thinking into the role of environmental services trade in achieving net zero objectives.



William Russell

Lord Mayor of the City of London



Call St. Com

Catherine McGuinness

Chair of the Policy & Resources Committee, City of London Corporation

Note:



https://www.cityoflondon.gov.uk/supporting-businesses/economic-research/research-publications/an-ecosystem-enabling-international-trade



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Executive Summary

In November 2021, the United Kingdom (UK) will host the 26th United Nations (UN) Climate Change Conference of the Parties (COP26) in Glasgow, bringing countries together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change.⁽¹⁾

To inform its preparations for COP26, the City of London Corporation ("COLC") commissioned KPMG to undertake a review of the current literature and evidence regarding the international trade of environmental services. The study focusses on three related areas:

- Understanding environmental services: exploring how environmental services are defined and segmented, their role in supporting the international trade in environmental goods, and the scale of environmental services activity in the UK and Europe.
- Barriers to trade in environmental services: assessing the type and extent of barriers to trade in environmental services, and how these barriers vary across the

- different types of environmental services considered above.
- Recent approaches to liberalising the trade in environmental services: considering how environmental services have been treated in recent trade agreements and other multilateral approaches, such as collaboration on the relevant regulation and standards.

The study draws on a range of literature and data gathered from external sources. It also incorporates anecdotal evidence gathered by COLC from a small number of companies active in the supply of environmental services, both in the UK and internationally.

The study is intended to provide an overview of the key issues, barriers and approaches to the international trade in environmental services. It is beyond the scope of the study to consider all possible approaches taken to liberalise the trade in environmental services, to undertake a detailed assessment of each approach, or to make any policy recommendations.



Understanding environmental services

The first section of the study considers the definition of environmental services, the role of these services in supporting the trade in environmental goods, and the scale of environmental services activity across the UK and Europe.

Defining environmental services is important for measuring the scale and trends in activity over time, for understanding the relevant barriers to trade, and for ensuring that there is a consistent policy dialogue between countries. The "traditional" approach to defining environmental services – used, for example, in negotiating the General Agreement on Trade in Services ("GATS") in the early 1990s – has been to define environmental services based on a narrow set of activities related to municipal utilities (such as sewage and water treatment) and the reduction of certain industrial emissions.

Since the negotiation of the GATS, however, our assessment indicates that the range of services that are in some way environmentally related has expanded significantly. A range of alternative definitions have therefore been proposed which encompass a broader range of activities, such as engineering, construction and certain business services. However, expanding the set of relevant services within the definition of environmental services raises new questions and issues, and there remains no agreed definition.

In this study, therefore, when analysing data associated with the trade in environmental services and assessing the barriers to their trade, we take a flexible approach to examining environmental services, leaving open the

precise definition and recognising instead that the extent to which a particular service or activity is an "environmental service" is a matter of degree.

Having considered the definition of environmental services, we reviewed evidence on the role of these services in supporting the trade in environmental goods. The evidence suggests that a broad range of services — including engineering, design and financial consulting — are critical in facilitating the trade of certain environmental goods (such as wind turbines and water filters). This supports the notion that a broad range of activities could be classified as environmental services, and suggests that barriers to trade in these services could have wider implications for the trade in environmental goods.

We also analysed data relating to the scale and trends in environmental services activity in the UK and Europe. Evidence collected from Eurostat indicates that UK output of "environmental goods and services" (EGS) totalled approximately £87.0 billion in 2018, with exports totalling approximately £11.3 billion. This suggests that the UK is Europe's third largest producer of EGS (behind Germany and France) and third largest exporter (behind Germany and Austria). As noted above, however, caution should be applied when interpreting such figures, as there is no fixed definition of environmental services. In the UK for example, there has been significant recent growth in both "sustainable finance" services and environmental consulting services, which are not fully reflected in the Eurostat figures.

- Source: (1) COP26 <u>UN Climate Change Conference (COP26)</u> at the SEC Glasgow 2021
 - (2) See section 2.4 below. Eurostat dataset ENV_AC_EGSS2, extracted on 15/3/2021.





Barriers to trade in environmental services

The second section of the report considers the available evidence relating to the key barriers to trade in environmental services. It begins by considering the "commitments" made to environmental services by WTO members under the GATS framework, which specify a set of binding conditions relating to market access and the national treatment of foreign suppliers. The evidence indicates that the commitments made to environmental services under the GATS are somewhat limited, with many countries having made no or only limited commitments to either market access or national treatment.

Whilst informative of the extent of trade liberalisation, the commitments made under the GATS generally refer only to the narrow "traditional" definition of environmental services discussed above, such as sewage and water treatment. Further, the GATS themselves are limited in their scope and coverage, and therefore do not fully reflect the extent of trade liberalisation, or barriers to trade, across countries and sectors.

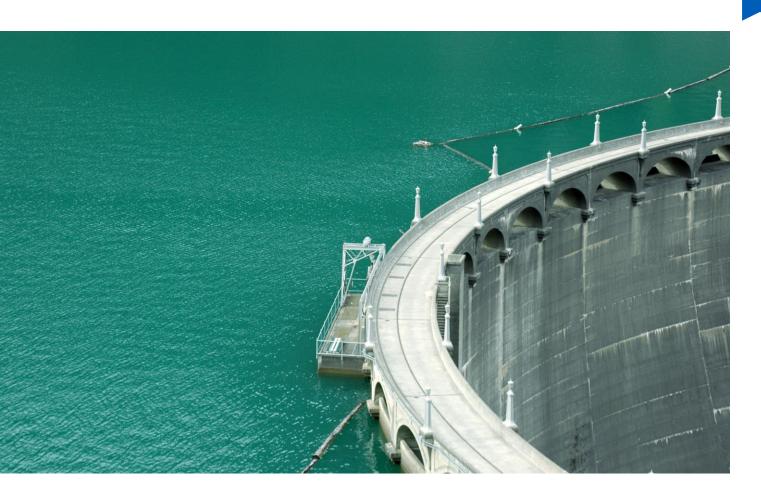
The OECD Services Trade Restrictiveness Index (STRI) provides evidence on a broader set of regulations and restrictions that could act as barriers to services trade. Although the STRI does not cover environmental services per se, it does cover activities that can be included in broader definitions of environmental services – such as architecture, engineering and construction. Evidence from the STRI indicates that for these services, important trade restrictions include those relating to the movement of people (e.g. recognition of foreign qualifications) and restrictions on foreign entry (e.g. foreign equity limits and requirements to establish a local presence to supply cross-border services).

To inform the analysis of barriers to trade, COLC contacted two organisations that provide environmental services in the UK and internationally. While evidence collected through these interviews cannot be considered representative of all providers of similar environmental services, we note that the views provided by these stakeholders broadly supports the evidence from the STRI. COLC informed us that both stakeholders indicated that mobility issues (such as visa requirements) present a challenge to the international trade of environmental services, and the stakeholders also noted issues in relation to the importance of tax regulations, the recognition of professional qualifications, and legal riahts establishment.

Finally, this section of the report briefly discusses the gravity framework, which is a widely used model of the international trade in goods and services. The gravity equation shows that international trade flows are well explained by two key factors: distance; and the size of the importing and exporting economies. This is important context when analysing barriers to trade, as it suggests that reductions in trade barriers will likely be most effective when they are undertaken by relatively large and/or geographically close economies. Interestingly, there is evidence from gravity models that a reduction in barriers to trade in architecture, engineering and construction (as captured by a reduction in the STRI for these activities) is correlated with an increase in the international trade of "core" environmental services (as used in the GATS).









Recent approaches to liberalising the trade in environmental services

The final section of the report considers some of the approaches taken to environmental services in recent multilateral discussions and trade agreements.

Based on the evidence reviewed in this study, at a multilateral level, progress on the liberalisation of environmental goods and services appears to have been limited, with major negotiations failing, as of yet, to reach agreement. In particular, environmental goods and services first became part of the negotiating agenda at the Doha Round of negotiations in 2001, which included the aim of reducing or eliminating trade barriers to environmental goods and services. Ultimately, members were unable to conclude negotiations under the Doha Round, in part due to a lack of agreement on the definition of environmental goods and services. There have, however, been recent discussions at the WTO's Council for Trade in Services regarding environmental services, with countries including the UK expressing interest in expanding WTO members' commitments to environmental services under the GATS.

At the regional level, the evidence shows that there has been an increase in the number of regional trade (RTAs) that agreements include environmental "provisions", through which countries agree to increase cooperation and negotiate environmental commitments that can go beyond multilateral agreements. Importantly, however, environmental provisions are much broader than dealing with the promotion of trade in environmental goods and services. They include elements such as commitments to uphold environmental laws and to ensure that trade liberalisation does not damage environmental protection. The evidence suggests that although environmental provisions have been included, in general, the coverage and extent of commitments to the trade in environmental services are often limited in RTAs.

A notable counter-example, however, is the ongoing negotiations over an Agreement on Climate Change, Trade and Sustainable Development (ACCTS) between six WTO members (Costa Rica, Fiji, Iceland, New Zealand, Norway and Switzerland). The ACCTS proposes to substantially reduce barriers to trade in both environmental goods and services, and to extend the agreed concessions to all WTO members on a most favoured nation basis.

Finally, this section of the report considers recent approaches to international collaboration over relevant regulations and standards. We focus on sustainable finance in particular, where such issues are being considered by a number of organisations. For example, the International Organisation of Securities Commissions (IOSCO) is working alongside the International Financial Reporting Standards (IFRS) Foundation and other stakeholders to encourage progress towards a globally consistent set of international standards for sustainability-related disclosures. These approaches represent important developments in the liberalisation of the international trade in sustainable finance, and may provide lessons for other environmentally-related services.





About the study





1.1 Overview

In November 2021, the United Kingdom (UK) will host the 26th United Nations (UN) Climate Change Conference of the Parties (COP26) in Glasgow, bringing countries together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change.⁽³⁾

To inform its preparations for COP26, the City of London Corporation ("COLC") commissioned KPMG to undertake a review of the current literature and evidence relating to the international trade of environmental services.

KPMG was asked to focus on three areas:

— The definition and role of environmental services: An assessment of how environmental services are defined and segmented, distinguishing for example between "core" environmental services and a broader definition which incorporates services such as consulting, architecture and engineering. We were also asked to review available evidence on the role of environmental services in supporting the trade in environmental goods, as well as the scale of environmental services activity in the UK and Europe.

- Barriers to trade in environmental services: An assessment of the extent to which there are barriers to trade in environmental services, distinguishing where relevant between the different categories of environmental services above.
- Recent approaches to environmental services in trade negotiations: An overview assessment of how environmental services have been treated in and trade agreements mechanisms such as mutual recognition agreements (MRAs), including a review of the evidence in the literature regarding the benefits and limitations of different approaches to the treatment of environmental services. It should be noted, however, that within the scope of our study, we did not conduct a comprehensive assessment of all potential approaches to the treatment of environmental services, nor do we make any recommendations as to how they should be treated in trade negotiations.



1.2 Approach

KPMG has conducted a literature review into the international trade in environmental services, including reviewing evidence in relation to:

- how environmental services are defined and segmented;
- the extent to which there are barriers to trade in the environmental services sector; and
- recent approaches that have been taken to environmental services in trade agreements and related trade mechanisms.

The analysis in this study draws primarily on a range of sources and data gathered from publicly available literature, such as relevant reports and articles published by the Organisation for Economic Cooperation and Development ("OECD"), the World Trade Organisation ("WTO") and the International

Institute for Sustainable Development ("IISD"), amongst others, and the references therein, identified through research by KPMG. It should be noted that we have not conducted a fully comprehensive review of all data and literature relating to international trade in environmental services, due to the budget and timeframe available for this study.

The analysis in the report also incorporates anecdotal evidence gathered by COLC from a small number of companies active in the supply of environmental services in both the UK and internationally, regarding the definition and scope of environmental services and some of the key barriers to trade. It should be noted that evidence collected through these interviews cannot be considered representative of all providers of environmental services.



Understanding environmental services





2.1 Overview

This section sets out some of the main issues that arise when analysing environmental services within the scope of our work. It begins by considering alternative approaches that have been taken to defining environmental services, and some of the issues associated with the different definitions. Defining environmental services is important for measuring and interpreting the scale and trends in activity over time, for understanding the relevant barriers to trade, and for ensuring that there is a consistent policy dialogue.

The "traditional" approach to defining environmental services focuses on activities related to municipal utilities (such as sewage and water treatment) and the reduction of certain industrial emissions (such as exhaust gases). This approach is heavily influenced by the classifications used in negotiating the General Agreement on Trade in Services ("GATS") in the early 1990s, and continues to influence the approach taken today by trade negotiators.⁽⁴⁾

Since the agreement of the GATS however, the evidence indicates that the range of services that are in some way environmentally related has expanded significantly. As such, several alternative definitions have been put forward that include broader activities such as engineering, construction and certain business and financial services.

However, there remains no agreed definition of environmental services, which makes the

measurement of their economic impact and scale challenging.

Section 2.3 for example considers evidence on the role of environmental services in supporting the trade in environmental goods. This evidence indicates that a broad range of services – including design, financial consulting and engineering – are critical to the trade of certain environmental goods (such as wind turbines). This suggests that traditional definitions (and official statistics) of environmental services may understate their true economic impact, and that barriers to trade in such services could have important knock-on effects for the trade in environmental goods.

Finally, section 2.4 analyses the scale of environmental services in the UK and Europe. Due to data limitations, this is based primarily on the Eurostat classification of the environmental goods and services sector. Based on this classification, UK output of environmental goods and services totalled approximately £87.0 billion in 2018, with exports totalling approximately £11.3 billion. (5) It is noted however that this definition does not fully capture the volume of UK services or assets related to sustainable finance, which have grown substantially in recent years.

The true scale and economic impact of environmental services may therefore be greater than captured in official statistics.



2.2 Defining environmental services

Core environmental services

The GATS came into force in January 1995, after eight rounds of negotiations between over 100 countries regarding the General Agreement on Tariffs and Trade ("GATT").⁽⁶⁾ The GATS constitutes a global set of rules governing the trade in services, to which all WTO members are parties.⁽⁷⁾ In

particular, the agreement contains a set of general obligations and principles, which are binding on all members, as well as a set of country-specific commitments ("schedules") to liberalise trade across certain sectors. (See section 3.2 of this report for details on the liberalisation of trade under GATS and country-specific commitments).

Source: (4) OECD, 2017. <u>Trade in Services Related to the Environment</u>

- 5) Production, value added and exports in the environmental goods and services sector| Eurostat extracted 17/03/2021. Converted from Euros "EUR" to Pound Sterling "GBP" using the Bank of England's 2018 year average exchange rate of 0.8847.
- (6) OECD, 1994. The General Agreement on Trade in Services (GATS): An Analysis
- (7) House of Commons Library, 2019. Trade in services and Brexit





2.2 Defining environmental services (cont.)

Under the GATS classification system, each sector is mutually exclusive such that services listed under one category should not be covered by another. (8) In principle, WTO members are free to use any sector classification they prefer, subject to the above. However, the main instrument used to negotiate country-level commitments under the GATS is the WTO Services Sectoral Classification List ("WTO classification"), which classifies sectors based on a provisional version of the United Nations ("UN") Central Product Classification ("CPC") list. (9)

One of the 12 sectors included in the WTO classification is "environmental services", using Division 94 of the UN CPC list. According to this classification, the environmental services sector comprises:(10)

- i. sewage services;
- ii. refuse disposal services;
- iii. sanitation and similar services; and

other environmental services (cleaning services for exhaust gases, noise abatement services, nature and landscape protection services, and other environmental services not elsewhere classified).

As discussed in OECD (2017), the WTO classification system therefore applied a narrow definition of "core" environmental services, essentially limited to services typically supplied by municipal utilities (such as sewage and water treatment) and the reduction of certain industrial emissions (such as exhaust gases).(11) The OECD (2017) notes that although WTO members are free to develop their own classification systems, trade negotiators generally continue to define environmental services in this way, following Division 94 of the UN CPC list. As noted by the OECD, the latest iteration of the CPC (version 2.1) is much the same as the provisional list used in negotiating the GATS, (12) as shown in Figure

Figure 1: Core environmental services, based on Division 94 of the UN CPC classification system

Provisional CPC list (1991)	CPC version 2.1 (2015)
Sewage services (9401)	Sewerage, sewage treatment and septic tank cleaning services (941)
Refuse disposal services (9402)	Waste collection services (942)
Sanitation and similar services (9403)	Waste treatment and disposal services (943)
Cleaning services of exhaust gases (9404)	Remediation services (944)
Noise abatement services (9405)	Sanitation and similar services (945)
Nature and landscape protection services (9406)	Other environmental protection services n.e.c. (949)
Other environmental protection services n.e.c. (9409)	

Source: UN (1991, 2015).⁽¹⁴⁾ The numbers in parentheses indicate the relevant service code in the UN CPC classification system.

Source: (8) Kirkpatrick, 2006. Trade in Environmental Services: Assessing the Implications for Developing Countries in the GATS, ICTSD 2006.

- (9) UN Statistics Division | The Central Product Classification
- (10) UN Statistics Division | The Central Product Classification
- (11) OECD, 2017. Trade in Services Related to the Environment
- (12) OECD, 2017. Trade in Services Related to the Environment
- (13) For example: "acidifying deposition ("acid rain") monitoring, controlling and damage assessment services.
- (14) UN Statistics Division | The Central Product Classification



Towards a broader definition of environmental services

As discussed by Kirkpatrick (2006), (15) it is widely recognised by most negotiating proposals that the WTO/ UN CPC classification of environmental services shown in Figure 1 is outdated, and does not reflect current market or policy realities. Kirkpatrick notes several relevant developments, including expanded regulatory requirements for involvement of the private sector in the supply of environmental services, and the shift in regulatory approaches from end-of-pipe emissions control to pollution prevention through the adoption of new technologies for cleaner production and products. OECD (2017) also notes that the environmental industry has grown from a relatively niche activity to become an important contributor to economic growth, spanning several sectors and activities. (16)

However, the WTO (2020)⁽¹⁷⁾ states that whilst its members generally recognise that the narrow classification of environmental services is outdated,

as yet there is no consensus as to what a broader definition should include. Indeed, since the development of the GATS in the early 1990s, several alternative definitions have been proposed by WTO members and other international organisations. A selection of these proposed definitions is provided in Figure 2.

Beyond those definitions in Figure 2, other recent proposals have also been put forward suggesting a broader definition of environmental services. For example, in a recent statement to the WTO's Council for Trade in Services, the UK government states that environmental services include a wider range of services than those captured under Division 94 of the CPC (above). (18) It notes that this includes services such as environmental consultancy services, environmental impact assessments and ecological services. As the full definitions that we understand have been put forward are not yet publicly available, these are not included in Figure 2 below.

Figure 2: Alternative approaches to defining environmental services

Organisation	Background and summary of proposed definition					
OECD/Eurostat (1999)	In 1999, an informal working group of experts from the OECD and European Community ("Eurostat") met to develop a more comprehensive classification of environmental services. (19) This resulted in the first manual for data collection and analysis of environmental services.					
	The OECD/Eurostat definition of the environmental goods and services industry encompasses "activities which produce goods and services to measure, prevent, minimise or correct environmental damage to water, air, soil, as well as problems related to waste, noise and eco-systems". (20)					
	Within this definition, environmental goods and services are divided into three main groups:					
	 pollution management, comprising goods and services that are supplied for an "environmental purpose" only and have a significant impact in reducing pollution emissions. This includes activities such as air pollution control, wastewater management and environmental monitoring; 					
	 ii. cleaner technologies and products, comprising goods and services which reduce or eliminate negative environmental impacts, but which are often supplied for non-environmental purposes, e.g. resource-efficient technologies, processes and products; and 					
	iii. resource management, comprising goods and services which may be associated with environmental protection, but whose "prime purpose" is not environmental protection, e.g. sustainable forestry and eco-tourism. (21)					

Source: (15) Kirkpatrick, 2006. Trade in Environmental Services: Assessing the Implications for Developing Countries in the GATS, ICTSD 2006.

- (16) OECD, 2017. Trade in Services Related to the Environment
- (17) WTO, 2020. Trade in Environmental Services: A WTO Perspective.
- (18) UK statement to the WTO's Council for Trade in Services Special Session GOV.UK
- (19) Kirkpatrick, 2006. Trade in Environmental Services: Assessing the Implications for Developing Countries in the GATS, ICTSD 2006.
- (20) OECD/Eurostat (1999) The Environmental Goods and Services Industry: Manual for Data Collection and Analysis.
- (21) OECD/Eurostat (1999) The Environmental Goods and Services Industry: Manual for Data Collection and Analysis.



Figure 2: Alternative approaches to defining environmental services (cont.)

United Nations Conference on Trade and development ("UNCTAD") (2003)

Background and summary of proposed definition

The UNCTAD (2003) classification subdivides environmental services into four segments:(22)

- i. environmental infrastructure services, e.g. water and waste management;
- ii. non-infrastructure, commercial environmental services, e.g. site clean-up and remediation, cleaning of exhaust gases, noise abatement, and nature and landscape protection;
- iii. remediation services with environmental end use, e.g. construction or engineering; and
- iv. support services.

Eurostat/UN (ongoing)

In 2009, Eurostat created a handbook that provided definitions, data collection methodologies and examples of environmental services. (23) The "environmental goods and services sector" ("EGSS") is embedded in the UN System for Environmental Economic Accounting ("SEEA"), which provides an international statistical standard for environmental-economic accounting. (24)

According to this definition, EGSS encompasses economic activities whose primary purpose is to reduce or eliminate pressures on the environment to make more efficient use of natural resources. Economic activities can be defined by their purpose through two broad types of environmental activities:

- Environmental protection ("EP") activities: prevention, reduction and elimination of pollution or degradation of the environment;
- Resource Management ("RM") activities: preservation, maintenance and enhancement of natural resources.

Whilst each of the definitions in Figure 2 is somewhat broader than the "core" services listed in Figure 1, it is clear that there remains significant divergence regarding the precise scope of environmental services. The fact that it has not yet been possible to reach a consistent definition reflects a number of challenging practical and conceptual issues. For example:

- Broadening the scope of environmental services to cover areas such as consulting, legal services and engineering creates a "dual use" problem, as such services are not exclusively used for environmental purposes. (25) This means that a working definition of environmental services would likely have to include a project- or user-specific element. Sugathan (2013)(26) notes that the issue of whether environmental goods and services should be defined on a "list" or "project" basis has been the subject of negotiations between WTO members.
- An area of discussion at the WTO has been the treatment of so-called "environmentally preferable products" ("EPPs"), which are those goods and services that have certain environmental benefits production, use or disposal) alternatives. (27) Examples include wind turbines, energy-efficient cars and organic produce. However, it is not clear how far such a concept should extend. Although this issue is particularly prominent for environmental goods, it is also relevant for certain services such as ecotourism and sustainable forestry. (28) The extent to which such services should be included in a definition of environmental services remains an open question.

Source: (22) Kirkpatrick, 2006. Trade in Environmental Services: Assessing the Implications for Developing Countries in the GATS, ICTSD 2006.

- (23) Eurostat, 2009. The Environmental Goods and Services Sector: A Data Collection Handbook
- (24) See UNEP, 2014. Measuring the Environmental Goods and Services Sector: Issues and Challenges. See also https://seea.un.org/.
- (25) OECD, 2017. <u>Trade in Services Related to the Environment</u>
- (26) Sugathan, 2013. Lists of Environmental goods: An Overview; Environmental Goods and Services Series, ICTSD 2013.
- (27) See for example Department for Business Innovation & Skills ("BIS"), 2014. Trade & the Environment: Trade and Investment Analytical Papers, Topic 14 of 18.
- (28) See for example IISD, 2014. Trade and Green Economy: A handbook (Third Edition) and Monkelbaan, 2011. Trade Preferences for Environmentally Friendly Goods and Services.



Individual WTO members have their own national interests and negotiating objectives, which can shape their approach to the classification of particular goods and services. For example, Monkelbaan (2011)(29) argues that it has proven difficult to arrive at a definition of environmental goods and services in part due to uncertainties between countries over the dispersion of economic and environmental benefits arising from the liberalisation of trade. The UK Department for Business, Energy and Industrial Strategy (BEIS, formerly the Department for Business, Innovation and Skills) (2014) notes that all negotiations, countries have certain offensive and defensive interests, and the absence of an agreed definition has proved to be a stumbling block in reaching progress on trade in environmental goods and services. (30)

We also note that in the various definitions of environmental services one area that is seemingly largely absent is "sustainable finance" – i.e. the process of taking environmental, social and governance ("ESG") considerations into account when making investment decisions in the financial sector. The evidence shows that global assets under management incorporating ESG mandates have increased significantly in recent years, although precise figures can vary depending on the definitions and categorisations used. The services of the environmental services of the environmental services are services of taking environmental, social and governance ("ESG") considerations into account when making investment decisions in the financial sector.

In global financial centres such as London, sustainable or "responsible" finance has developed into a growing area of services output and growth. This growth is reflected in the number of UK services firms participating in sustainable and responsible finance – in 2021 for example, there were more than 90 green equity issuers on the London Stock Exchange and over 500 UK investors had signed up to the UN's Principles of Responsible Investment. (33)

A flexible approach to defining environmental services

The discussion above highlights that there are a range of challenges in attempting to formulate a precise definition of environmental services. Amongst such challenges is the fact that different WTO members have their own objectives, and negotiations regarding the scope of environmental services in part reflect those objectives. (34) Further, the scope of environmentally-related activities has expanded considerably in recent decades, such that earlier definitions may no longer capture the full range of relevant activities.

A flexible approach to defining environmental services (cont.)

As noted by the OECD (2017),⁽³⁵⁾ the extent to which a particular activity is an "environmental service" is ultimately a matter of degree, which often depends on the specific context and can vary due to changing technologies. A flexible approach to the analysis of environmental services is therefore to keep open the precise definition, recognising instead that different activities can serve environmental purposes to different extents.

This approach to defining environmental services is illustrated in Figure 3, which is adapted from OECD (2017). The centre circle captures the set of "core" environmental services, such as those included in the GATS definition (see Section 2.2.2). The middle circle captures those services that are not exclusively or always environmentally related, but often serve environmental purposes (such as construction, engineering and sustainable finance services). Finally, the outer circle captures those activities whose primary purpose is typically not environmentally related, but which may support environmental activities on an ad-hoc or project basis (such as legal and consultancy services).



Source: (29) Monkelbaan, 2011. Trade Preferences for Environmentally Friendly Goods and Services.

⁽³⁶⁾ OECD, 2017. Trade in Services Related to the Environment



⁽³⁰⁾ BIS, 2014. Trade & the Environment: Trade and Investment Analytical Papers, Topic 14 of 18.

⁽³¹⁾ See for example Sustainable finance | European Commission for a discussion.

⁽³²⁾ See for example Schroders (2021). How the world is warming to sustainable investing: developments in regulation and investor demand; and The Global City, 2021. The Global Sustainable Finance Market Factsheet.

⁽³³⁾ The Global City, 2021. The Global Sustainable Finance Market Factsheet

⁽³⁴⁾ See for example Department for Business, Innovation and Skills (BIS), 2014. Trade & the Environment: Trade and Investment Analytical Papers, Topic 14 of 18.

⁽³⁵⁾ OECD, 2017. Trade in Services Related to the Environment

Figure 3: The degree to which services relate to the environment

Core environmental services

e.g. wastewater treatment.

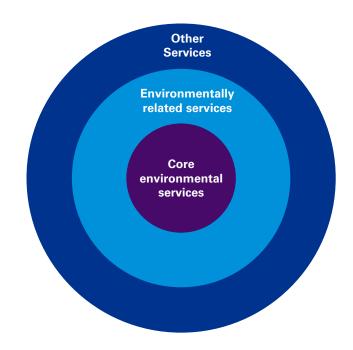
Environmentally related services

e.g. construction, engineering and sustainable finance.

Other services incidentally related to the environment

Services that may support environmental activities on an ad-hoc or project basis (e.g. legal or accounting services).

Source: Adapted from OECD (2017)(37)





2.3 The complementarity between environmental services and environmental goods

As well as considering the definition and scope of environmental services, this section of the study considers the role of environmental services in supporting the trade in environmental goods, and whether that varies according the different types of environmental services discussed above. This has important implications, because barriers to trade in environmental services (discussed in Section 3) could have significant knock-on effects for the trade in environmental goods. Further, due to this supporting role, official statistics on the scale of the environmental services sector may understate its true economic impact. (39)

An example of the various services that support the trade in environmental goods is provided in Figure 4, adapted from WTO (2020)⁽⁴⁰⁾ and IISD (2020).⁽⁴¹⁾ The information is based on research from Sweden's National Board of Trade (2014),⁽⁴²⁾ which conducted detailed case studies of the trade in two specific

environmental goods: purifying water filters and wind-powered rotary convertors. The two case studies indicated that many of the services listed in Figure 4 were "indispensable" for the international trade of these products to occur. For example, advisory and consultancy services were important in increasing customer satisfaction and fulfilling regulatory demands; R&D services were important in customising the product (e.g. to adapt to local conditions); and environmental protection services were important for complying with regulations.

It is notable that the list of services in Figure 4 that support the trade of environmental goods is wide ranging, and clearly extends well beyond the narrow definition of "core" environmental services discussed in Section 2.2. Such services include financial consulting, design, engineering and IT services.

Source: (37) OECD, 2017. <u>Trade in Services Related to the Environment</u>

⁽⁴²⁾ Swedish National Board of Trade (2014). Marking Green Trade Happen - Environmental Goods and Indispensable Services.



⁽³⁸⁾ As for environmental services, there is no agreed definition of "environmental goods". The Eurostat/ UN classification discussed in Figure 2 includes both goods and services, which includes activities whose primary purpose is to reduce or eliminate pressures on the environment to make more efficient use of natural resources. A further discussion of environmental goods is provided in Sugathan (2013) and IISD (2014).

⁽³⁹⁾ Statistics on the environmental goods and services sector in Europe, based on the Eurostat definition, are provided in Section 2.4 below.

⁽⁴⁰⁾ WTO, 2020. Trade in Environmental Services: A WTO Perspective.

⁽⁴¹⁾ IISD, 2020. Trading Services for a Circular Economy

Figure 4: The various services that support environmental projects

Before delivery In connection to After delivery of goods delivery of goods of goods Advisory and consultancy Installation Monitoring and evaluation services services Ensuring the correct setup and Increasing product quality and functioning of the product Essential to the functioning of the fulfilling regulatory requirements. product and to fulfil regulatory requirements **Computer services** Assembly, production and Technical testing and analytical industrial design services Essential to the functioning of the Essential to the functioning of the Essential to the functioning of the product. product, e.g., fulfilling regulatory product. demands. Maintenance and repair **R&D** services Technical testing and analytical services services Customisation of the product. Essential to the functioning of the Essential to the functioning of the product, e.g., fulfilling regulatory product. demands. **Educational services Environmental protection Environmental protection** services services Ensuring correct use of product Ensuring regulatory compliance. and improving efficiency of Ensuring regulatory compliance. product and user. **Transportation** Design, construction and engineering Delivery of product Essential to the functioning of the product. **Procurement services** Obtaining goods and services.

Source: WTO (2020), IISD (2020)(43)

The City of London Corporation and EY (2021) analysed the role that financial and professional services play in supporting international trade more broadly, focusing in particular on the role of legal services, trade finance and maritime services (including chartering services, ship finance and marine insurance). (44) The study found that financial and professional services assist firms throughout the trading journey, from construction and production through to end-delivery. Some of the specific issues faced by exporting firms, where legal services, trade finance and maritime services can play an important supporting role, include the following: (45)

- Certainty of the regulatory environment: Legal services support exporters through advice on the different regulatory requirements and compliance obligations across jurisdictions, as well as related aspects such as antitrust laws on joint ventures. Trade finance services can help companies limit the risks of unexpected regulatory changes through credit insurance and guarantees, and maritime services can help reduce such risks through the provision of maritime insurance.
- Costs of doing business: Legal services can help reduce overall uncertainty and the costs of doing business through putting in place legal

- agreements and contracts, as well as appropriate mechanisms and advice on dispute resolution.
- Availability of financing: Legal services help exporters access finance by providing legal certainty on the obligations and mechanisms for guarantees and collateral. Trade finance provides access to cash and supports working capital requirements, which can be particularly critical for small and medium enterprises (SMEs).
- Transport and geographical considerations: Trade finance services enable access to finance and credit to support upfront costs of trading, including transport costs. Maritime services reduce the potential costs associated with shipping, including for losses and delays.

The examples above highlight the important role that financial and professional services play in facilitating and supporting international trade. While such services would not traditionally be considered "environmental services", to the extent that these services are deployed to support the trade in environmental goods, or to support the trade in other environmental services, they would be relevant to consider within a broader definition of environmental services.



2.4 The environmental services sector in the UK and Europe

Overview

This section considers the scale of the environmental services sector in the UK and Europe. As noted previously there are a range of different definitions of the sector. Due to data availability, our analysis in this section is primarily based on the Eurostat classification of environmental goods and services (discussed in the final row of Figure 2), which is not limited to the services sector and also includes the output of environmental goods. (46) As detailed above, there are limitations to the definition, for example it does not capture the full range of environmentallyrelated services and activities, such as sustainable finance. The analysis in this section should be read with this in mind, however it provides an indication of the scale of the sector - first considering the output levels of the environmental goods and services sector, and then the international trade environmental goods and services.

Environmental goods and services sector output

In 2018, UK output in the environmental goods and services sector (based on the Eurostat definition) totalled approximately £87.0 billion, (47) representing approximately 4 percent of total GDP. (48) The breakdown of this output by industry is provided in Figure 5. The breakdown of activities in Figure 5 highlights that even using a relatively broad definition of environmental goods and services, the output is largely made up of many of the "core" services discussed in Section 2.2.1. In particular, the largest share of the total output of UK environmental goods and services according to the Eurostat definition is from:

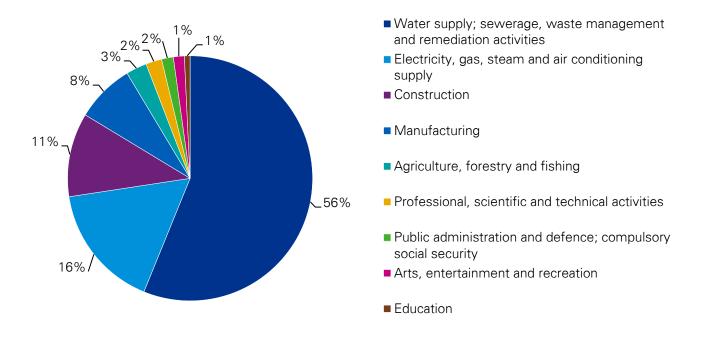
- i. water supply, sewerage, waste management and remediation activities:
- ii. electricity, gas, steam and air conditioning supply; and
- iii. construction.

Source: (44) The City of London Corporation and EY, 2021. The City of London: an ecosystem enabling international trade.

- (45) The City of London Corporation and EY, 2021. The City of London: an ecosystem enabling international trade.
- (46) Data is extracted from Eurostat, covering the total environmental goods and services sector (dataset ENV_AC_EGSS2).
- (47) Converted from Euros "EUR" to Pound Sterling "GBP" using the Bank of England's 2018 year average exchange rate of 0.8847 (please see EUR exchange rates | Bank of England | Database), with UK output totalling approximately €98.4 billion.
- (48) Based on the Eurostat classification of environmental goods and services. The latest data available is for 2018.



Figure 5: UK environmental goods and services output, by industry (2018)



Source: Eurostat. (49)

Figure 6 shows the 10 largest producers of environmental goods and services in Europe (i.e. those countries with the highest level of output in 2018). Germany is Europe's largest producer,

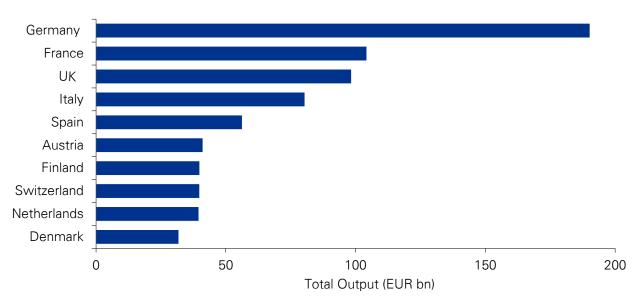
followed by France and the UK. In Germany, environmental goods and services account for a slightly larger share of total GDP (6 percent) than in the UK (4 percent).



Source: (49) Production, value added and exports in the environmental goods and services sector Eurostat extracted 17/03/2021.



Figure 6: European countries with the highest level of output of environmental goods and services (2018)

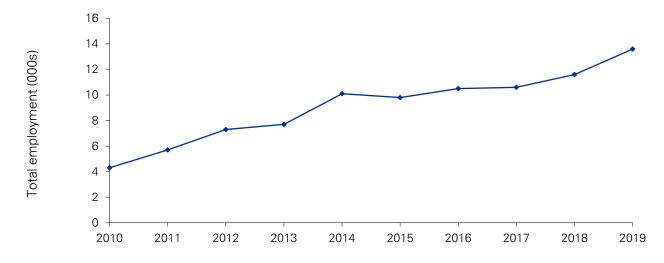


Source: Eurostat(50)

It is not possible to analyse trends in the Eurostat data to any significant extent, as data is unavailable for certain countries in earlier years. However, we note that for the UK, the Eurostat data indicates that sector output as a percentage of total UK GDP has remained relatively constant at around 4 percent between 2011 and 2018.

The Eurostat data on environmental goods and services, however, may not fully reflect recent trends in certain environmentally related activities in the UK, such as sustainable finance (discussed in section 2.2.2 above). Further, Figure 7 below shows the growth of employment in "environmental consulting activities" in Great Britain (GB) over the last ten years. (51) Over this period, employment expanded from 4.3 thousand in 2010 to 13.9 thousand in 2019.

Figure 7: GB employment in environmental consulting activities (2010 - 2019)



Source: ONS(52)

Source: (50) Production, value added and exports in the environmental goods and services sector | Eurostat extracted 17/03/2021. Converted from Euros "EUR" to Pound Sterling "GBP" using the Bank of England's 2018 year average exchange rate of 0.8847 (please see <u>EUR exchange rates | Bank of England | Database</u>).

⁽⁵²⁾ Data is taken from the ONS Business Register and Employment Survey (BRES) dataset. Data for 2019 is provisional. Environmental consulting activities refer to SIC code 74901, extracted 17/03/2021.



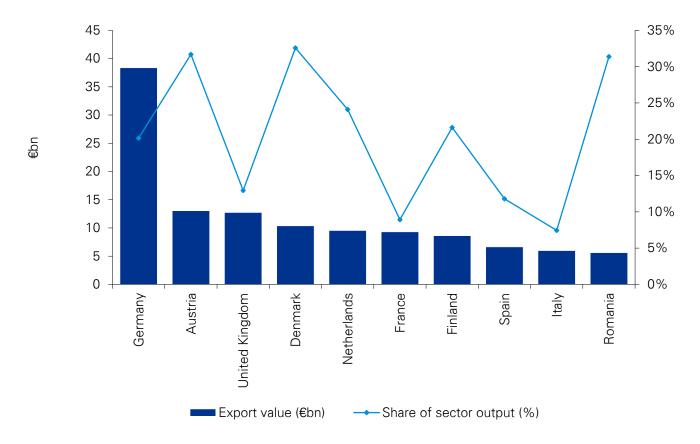
⁽⁵¹⁾ Environmental consulting activities are captured by the Standard Industrial Classification (SIC) code 74901. They are therefore classified within "other professional, scientific and technical activities not elsewhere classified" (74.90). The ONS explains that code 74.90 "includes a great variety of service activities generally delivered to commercial clients. It includes those activities for which more advanced professional, scientific and technical skill levels are required, but does not include ongoing, routine business functions that are generally of short duration" (source: UK Standard Industrial Classification of Economic Activities 2007: Structure and Explanatory Notes).

International trade in environmental goods and services

Figure 8 shows the largest exporters of environmental goods and services in Europe, again based on Eurostat data. The figure also indicates the share of environmental goods and services exports in total output (i.e. exports divided by output). The Eurostat EGSS data follows the European System of Accounts (ESA) 2010 definition of exports, i.e. exports of goods and services consist of transactions in products (sales, barter, and gifts) from residents to non-residents.⁽⁵³⁾

As for total output, Germany is Europe's largest exporter of environmental goods and services (using the Eurostat definition), followed by Austria and the UK. As a percentage of each country's total output of environmental goods and services, export intensity vary considerably, being over 30 percent in countries such as Austria and Denmark but below 10 percent in France and Italy. In the UK, environmental goods and services exports account for 13 percent of output, which is lower than for the economy as a whole (in which total exports account for around 30 percent of total GDP).

Figure 8: Exports of environmental goods and services, by European country (2018)



Source: Eurostat⁽⁵⁴⁾

Source: (53) Eurostat (2016) Environmental goods and services sector accounts: practical guide.

⁽⁵⁴⁾ Production, value added and exports in the environmental goods and services sector | Eurostat, extracted 17/03/2021. Converted from Euros "EUR" to Pound Sterling "GBP" using the Bank of England's 2018 year average exchange rate of 0.8847 (please see EUR exchange rates | Bank of England | Database).



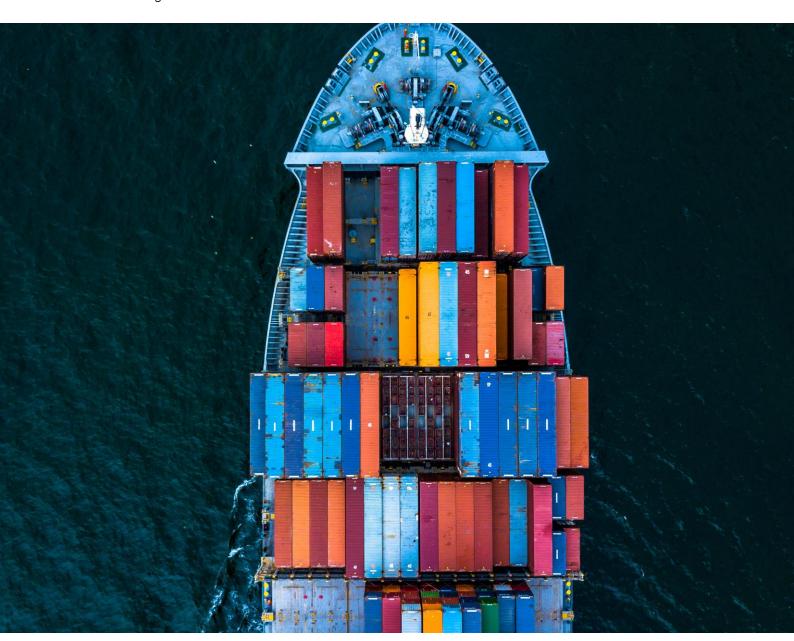
There is limited data on the direction of international trade flows for environmental services alone (i.e. separate from environmental goods). As noted in Section 2.3 however, environmental services are complementary to environmental goods, and are often provided alongside the trade of environmental goods. Therefore, we have analysed data relating to the UK's largest export markets for environmental goods in 2019 as well as export markets for services overall, as shown in Figure 9.

Figure 9 shows that the UK's largest export markets for environmental goods are the USA, Germany and China, with the USA alone accounting for a fifth of the UK's exports. This analysis is based on the Asia-Pacific Economic Cooperation ("APEC") (2012) list of environmental goods and we note that it should be

viewed as indicative only; alternative definitions may produce different results. (55)

The right-hand chart in Figure 9 presents the UK's largest export markets for total services. It is notable that there is significant consistency with the markets for environmental goods – again with the USA accounting for around a fifth of the UK's total exports.

As discussed in the following section, this reflects the importance of GDP and distance in determining international trade flows for both goods and services (i.e. the gravity framework). This suggests that the UK's largest markets for environmental services are therefore also likely to be captured by the countries shown in Figure 9.

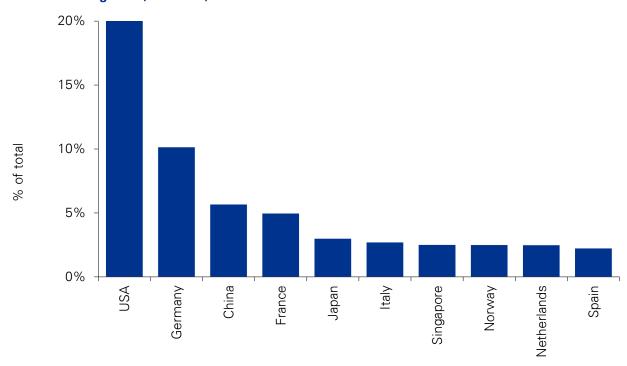


Source: (55) The list of goods is provided in APEC (2012) Leaders' Declaration: Annex C – APEC List of Environmental Goods. The APEC list includes a set of environmentally related products defined at the six-digit HS code level.

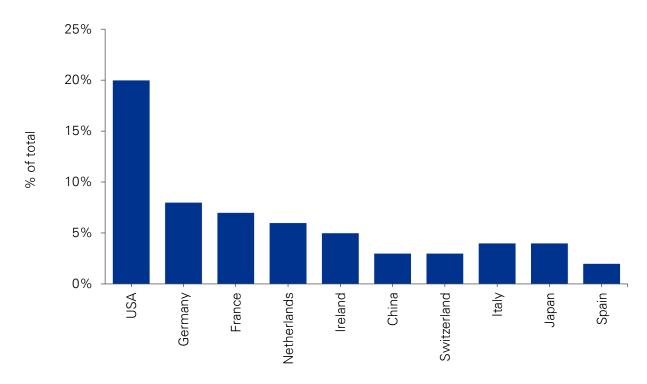


Figure 9: The UK's largest export markets for environmental goods and total services (2019)

Environmental goods (APEC list)



Services (all)



Source: UN Comtrade; OECD-WTO Balanced International Trade in Services (56)

Barriers to trade in environmental services





3.1 Overview

This section considers some of the key barriers to the international trade in environmental services identified through our review of the literature and based on anecdotal evidence provided by a small number of environmental service providers interviewed by COLC. In considering the barriers to trade we distinguish, where relevant, between the different definitions of environmental services in section 2 above.

The evidence shows that WTO members have made relatively limited commitments to liberalise the trade in environmental services under the GATS framework, particularly for the cross-border supply of services. Indeed, under the GATS, many countries have made no or only limited commitments to either "market access" (i.e. fair and equal competitive conditions for access to the domestic market) or "national treatment" (i.e. commitments not to operate discriminatory measures that benefit domestic suppliers).

However, in interpreting GATS commitments, it is important to note that WTO members have typically applied a narrow or "traditional" definition of environmental services. Further, the GATS framework does not fully capture the extent of trade liberalisation in practice, such that it is necessary to take a more holistic approach to analysing the barriers to trade.

Using the OECD's Services Trade Restrictiveness Index ("STRI"), the section therefore considers evidence relating to a broader range of barriers to trade in services, particularly those affecting environmentally-related activities such as architecture, engineering and construction services. The evidence shows that even amongst the UK's largest trading partners, there are a range of regulations and restrictions that could act as barriers to trade for environmentally-related services – including requirements to have a local presence to supply cross-border services, requirements for foreign nationals to take local examinations, and rules relating to taxes and subsidies.

The gravity model provides important context for interpreting and analysing such barriers to trade. In particular, the gravity model shows that bilateral trade flows are well explained by two key factors: distance, and size of the importing and exporting economy. Reductions in trade barriers will therefore likely have the biggest impact when they are undertaken by relatively large and/or geographically close economies. For countries such as the UK, it is therefore likely that changes to regulations and restrictions in markets such as the USA, Germany and France will have a more significant impact on its trade in environmental services than changes in smaller or more distant markets.



3.2 Obligations and commitments to environmental services under the GATS

The GATS framework

As discussed in section 2.1 of this report, the GATS constitutes a global set of rules governing the international trade in services, to which all WTO members are parties. (57) In particular, the GATS contains a set of general obligations and principles, which are binding on all members, as well as a set of member-specific commitments to liberalise trade across certain sectors.

There are two principal obligations in the GATS that apply to all WTO members and across all sectors: (58)

- Most Favoured Nation ("MFN") treatment: Under Article II of the GATS, if any advantage is given to the services supplied by any foreign member, it must be extended to any "like" services from all WTO members.
- Transparency: Members are required to publish all applicable rules and regulations and to respond to other members' information requests.

Source: (57) House of Commons Library, 2019. <u>Trade in services and Brexit</u> (58) WTO. See: <u>The GATS: objectives, coverage and disciplines</u>





3.2 Obligations and commitments to environmental services under the GATS (cont.)

In addition to the two general obligations above, each WTO member can specify a schedule of "commitments", for which additional principles and obligations will apply. A member's commitments are specified for each individual sector, and within each sector, across the four "modes" of supply detailed in Figure 10. Importantly, unlike the obligations of MFN treatment and transparency, members are free to tailor the sector coverage and content of their commitments as they see fit. (59)

A member's schedule of commitments, for each sector and mode of supply combination, cover both its national treatment of foreign and domestic service suppliers, as well as certain conditions relating to market access:

- National treatment: A commitment to national treatment implies that the member does not operate discriminatory measures that benefit domestic suppliers. The key requirement is a commitment not to modify the conditions of competition in favour of the member's domestic service industry.
- Market access: Market access commitments specify the extent to which there are fair and equal competitive conditions for access to the domestic market. In particular, members can specify the level and type of restrictions relating to factors including: the permitted types of legal entity or joint venture, the participation of foreign capital, and the maximum number of suppliers.



Source: (59) WTO. See: The GATS: objectives, coverage and disciplines



Figure 10: The four modes of supply and their significance across sectors

The GATS identifies four "modes" under which the cross-border supply of services can be consumed and delivered:⁽⁶⁰⁾

- Mode 1: Cross-border. Services are provided remotely, without the consumer or supplier crossing borders. Example: a consultancy firm in London provides advisory services to a client based in New York.
- Mode 2: Consumption abroad. Services are consumed by a foreign national whilst abroad. Example: a tourist consumes health services whilst on holiday.
- Mode 3: Commercial presence. Services are provided by a foreign company through the establishment of a subsidiary in another country. Example: a French company creates a subsidiary in the UK to provide wastewater treatment services.
- Mode 4: Movement of natural persons. Services are provided by foreign nationals. Example: an engineer from India travels to the USA to provide advice on a construction project. Note that this is distinct from mode 2 based on where the service is consumed and provided: under mode 2 the service is consumed abroad, whereas under mode 4 the service is provided abroad.

As shown in the table below, the international supply of services primarily occurs under mode 1 (cross-border supply) and mode 3 (commercial presence). The precise figures in the table should be treated with some caution however, as there is limited evidence available on the breakdown of trade by mode of supply. Evidence from the European Commission (2016) also indicates that mode 3 and mode 1 collectively account for the large majority of the international trade in services.⁽⁶¹⁾

Mode	Estimated share of the value of international trade in services
Mode 1: cross-border supply	30%
Mode 2: consumption abroad	10%
Mode 3: commercial presence	55%
Mode 4: movement of natural persons	<5%

Source: Lanz & Maurer (2015). (62)(63)

The relative importance of the different modes (i.e. their share of the value of international trade) varies considerably across sectors. For example, services such as distribution and utilities supply (including those captured within the narrow definition of environmental services) are typically supplied under mode 3.⁽⁶⁴⁾ However, many of the services included within broader definitions of environmental services. such as maintenance and repair, financial and business services, are provided through several different modes (Rueda-Cantuche et al, 2016). (65) UK Finance (2021)⁽⁶⁶⁾ for example shows that financial services are primarily traded internationally through modes 1 and 3, although the volumes traded under mode 3 are substantially larger than those under mode 1.

Due to technological developments, evidence suggests that firms are increasingly able to supply services remotely, such that the relative importance of mode 1 may have grown over time. Indeed, the OECD (2017)⁽⁶⁷⁾ notes that certain environmental services that traditionally had to be provided locally, such as the monitoring of wind turbines and water treatment plants, can now be provided remotely due to enhanced technology.

As noted by the OECD (2017), (68) it is therefore not only the *scope* of environmental services that has changed over time, but also their *mode* of delivery.

Source: (60) WTO. See: <u>Basic Purpose and Concepts: Definition of Services Trade and Modes of Supply</u>

- (61) Rueda-Cantuche, Kerner, Lucian & Ritola, 2016. Trade in Services by GATS Modes of Supply: Statistical Concepts and First EU Estimates.
- (62) Lanz, Rainer; Maurer, Andreas, 2015. Services and global value chains: Some evidence on servicification of manufacturing and services networks, WTO Staff Working Paper, No. ERSD-2015-03, World Trade Organization (WTO), Geneva
- (63) For alternative estimates of the breakdown of international trade by mode, see the evidence in Rueda-Cantuche et al (fn 61).
- (64) OECD, 2017. Trade in Services Related to the Environment
- (65) Rueda-Cantuche, Kerner, Lucian & Ritola, 2016. Trade in Services by GATS Modes of Supply: Statistical Concepts and First EU Estimates.
- (66) UK Finance, 2021. International trade in financial services: Defining trade policy for banking, payments and related financial services.
- (67) OECD, 2017. Trade in Services Related to the Environment
- (68) OECD, 2017. Trade in Services Related to the Environment



Environmental services commitments

Figure 11 indicates the extent of WTO members' commitments to environmental services under the GATS. As discussed above, commitments are made in relation to both market access and the national treatment of foreign suppliers, and are specific to each combination of sector and mode of supply. Where no commitment is made, the relevant sector and mode of supply combination is said to be "unbound". In contrast, a member may make a "full commitment" to the relevant sector and mode of supply combination, under which it will apply all relevant rules and obligations.

Figure 11 indicates that the level of commitments to environmental services under the GATS framework has been relatively limited. This is particularly the case for mode 1, with many countries having made no or only limited commitments to either market access or national treatment. This is particularly notable given that mode 1 has likely increased in significance over time, as technological developments have enabled more services to be provided remotely (see the discussion in Figure 10).

The evidence suggests, therefore, that WTO members have made limited commitments to liberalise the trade in environmental services under the GATS. This is true for both national treatment (i.e. commitment not to operate discriminatory measures that benefit domestic suppliers) and market access (i.e. commitments over certain rules regarding access to the domestic market). It is important to note, however, that in setting their GATS commitments, WTO members have typically applied the narrow definition of environmental services which are largely limited to utilities such as wastewater treatment. (70) As sewerage and discussed below, the GATS framework also does not fully capture the extent of trade liberalisation in practice, such that it is necessary to take a more holistic approach to analysing the barriers to trade.

Figure 11: GATS commitments to environmental services

Mode of supply	Market	access	National treatment			
	Unbound	Full commitment	Unbound	Full commitment		
Mode 1: cross-border supply	84%	10%	80%	20%		
Mode 2: consumption abroad	57%	32%	55%	45%		
Mode 3: commercial presence	55%	20%	55%	45%		
Mode 4: movement of natural persons	54%	0%	54%	14%		

Source: OECD, 2017. (69)



Source: (69) OECD, 2017. Trade in Services Related to the Environment

(70) See section 2.2 for a discussion on alternative definitions of environmental services



Interpreting the GATS commitments

As discussed above, the GATS framework provides a set of overarching principles for the international trade of services, as well as a set of member-specific commitments relevant to specific sectors and modes of supply. These commitments are indicative of the extent to which each member has liberalised international trade in the relevant sector. However, it is important to note that the GATS commitments do not fully capture the true extent of trade liberalisation in practice. In particular:

- GATS commitments are specified with regard to the level of market access and the national treatment of foreign suppliers. However, these two areas do not cover all possible barriers to trade. For example, factors such as the use of standards, qualifications and licenses do not fall under the market access and national treatment provisions of the GATS (although members can "additional commitments" in certain areas). (71) Similarly, market structure – such as the presence of a state-controlled firm in the relevant sector - can act as a barrier to entry for foreign suppliers, but is beyond the scope of the GATS commitments. Section 4.4 below considers some of the approaches to addressing aspects that fall outside the GATS, including regulatory dialogue and diplomacy.
- GATS commitments entail a set of binding principles and obligations in the relevant sectors. Miroudot and Pertel (2015)⁽⁷²⁾ argue that many WTO members have therefore specified a minimal level of GATS commitments in order to retain "policy space". The authors analysed the GATS commitments of 40 countries across 15 service sectors against the actual rules and regulations applied under their trade policy, as captured in the OECD Services Trade Restrictiveness Index ("STRI"). The authors found that in practice, trade is typically more liberal than indicated in the GATS commitments.
- Under the WTO framework, members are free to negotiate reciprocal free trade agreements ("FTAs"), which can go further than their GATS commitments. De Melo and Vijil (2014)⁽⁷³⁾ analysed the commitments made to environmental services in 57 bilateral and regional trade agreements ("RTAs") in which an OECD member, China or India is a party. The authors found that substantial commitments can be

included in RTAs, in some cases with countries committing almost fully open to environmental services sector, despite the sector being "unbound" in the GATS. Interestingly, the authors found that the commitments in RTAs involving the USA tended to go further than those involving the EU, which they attribute to the difference in negotiating templates: the US typically uses a "negative" list approach (in which all sectors are included except for those on the list), whereas the EU typically uses a "positive" list approach (in which only those sectors on the list are included).(74)



Source:

(71) WTO | Services - CBT - Main Building Blocks: Agreement, Annexes, and Schedules - Specific Commitments

(72) Miroudot & Pertel (2015), Water in the GATS: Methodology and Results.

(73) De Melo & Vijil, 2014. Barriers to trade in environmental goods and environmental services.

(74) De Melo & Vijil, 2014. Barriers to trade in environmental goods and environmental services.





3.3 Other barriers to trade in environmental services

Section 3.2 above considered the commitments made to environmental services under the GATS. The evidence shows that the extent of liberalisation under the GATS is somewhat limited for environmental services, with many countries leaving the sector "unbound". It is important to note, however, that the commitments made under the GATS generally refer only to the narrow set of environmental services discussed in section 2.2.1. Further, the GATS themselves are limited in scope, and therefore do not fully capture the extent of liberalisation, or barriers to trade, across countries and sectors. In this subsection of the report, we therefore consider evidence beyond the GATS framework to assess both a broader range of barriers to trade in services, and a broader range of environmentally related activities.

A key source of information for analysing the barriers to trade in services is the OECD STRI database.

The STRI classifies barriers to services trade into five categories: (75)

- Restrictions on foreign entry: this includes information on foreign equity and ownership limitations, nationality requirements for management and company boards, restrictions on cross-border mergers and acquisitions, and regulations on cross-border data flows.
- Restrictions on the movement of people: this includes information on visa requirements, duration of stay limitations, the recognition of foreign qualifications and licensing restrictions
- Other discriminatory measures: this includes information on discriminatory treatment of foreign services suppliers, e.g. with regard to taxes, subsidies or public procurement, and instances where national standards differ from international standards.
- Barriers to competition: this includes information on antitrust policy, government ownership of major firms, and the extent to which state-owned enterprises are exempt from competition laws and regulation.

 Regulatory transparency: this includes information on the consultation and dissemination process for laws and regulations, as well as information on procedures for establishing a company, obtaining a license or a visa.

The STRI provides information on regulations and restrictions affecting the trade in services across a range of countries and sectors, which collectively account for over 80 percent of the global trade in services.⁽⁷⁶⁾

The STRI, however, does not provide a complete coverage of all service sectors and activities. For example, the STRI's financial services coverage is limited to commercial banking and insurance activities, and within these two areas certain activities such as investment banking and pension services are not captured (Rouzet et al, 2014).(77) Importantly, for the purposes of this paper, the STRI does not define an environmental services sector per se, and does not cover the "core" environmental services discussed in section 2.2.1. Our analysis therefore focusses on the sectors that are captured within the STRI and that are most often included in the broader definitions of environmental services discussed in section 2.2.2: specifically architecture, construction and engineering.

Figure 12 shows the magnitude of trade restrictions for architecture, construction and engineering, across each of the five categories of barriers to trade detailed above. In particular, the STRI indices take a value from zero to one: complete openness to trade and investment is given a score of zero, and being completely closed to foreign services providers yields a score of one. A higher score is therefore indicative of higher barriers to trade. Figure 12 is constructed by taking the average STRI score across all countries in the OECD dataset, across each of the five categories, and each of the three sectors (architecture, construction and engineering).

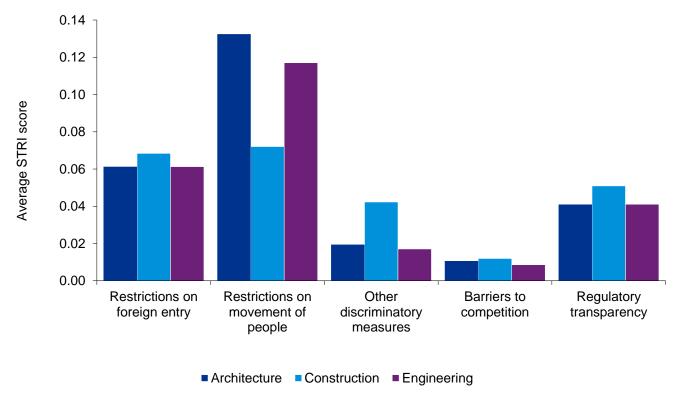
Source: (75) See: Services Trade Policies and the Global Economy

(76) OECD. See: Services Trade

(77) Rouzet, Nordås, Gonzales, Geloso Grosso, Lejárraga, Miroudot & Ueno, 2014. Services Trade Restrictiveness Index (STRI): Financial Services.



Figure 12: Average STRI scores for environmentally related activities (architecture, construction and engineering)



Source: OECD STRI(78)

Figure 12 indicates that the highest levels of restrictions in each sector relate to the movement of people, which includes restrictions such as visa requirements and the recognition of foreign qualifications. The magnitude of such restrictions varies considerably across sectors however, being much higher in architecture and engineering than in construction. It is notable that the lowest levels of restrictions relate to barriers to competition, such as antitrust and government ownership of major firms.

Overall, for architecture, engineering and construction, the STRI database indicates that the UK's largest trading partners (such as the USA, Germany and France) have levels of restrictiveness that are generally below the OECD average. For each of the three services for example, the USA, Germany and France each have all have STRI scores below the OECD average, with the exception of architecture in France (STRI score of 0.32 compared to an OECD average of 0.24).



To inform the analysis of barriers to trade, COLC contacted organisations that provide two environmental services in the UK and internationally to obtain their views on the barriers to trade in the environmental services that thev internationally. Although it cannot be considered representative all providers of of environmental services, the anecdotal evidence provided by these stakeholders broadly supports the evidence from the STRI. COLC informed us that both stakeholders indicated that mobility issues (such as visa requirements) present a challenge to the international trade of environmental services, and the stakeholders also noted the importance of tax regulations, issues relating to the recognition of professional qualifications and legal rights of establishment. COLC informed us that one of the two organisations, for example, stated that tax regulations can be a real challenge, with the company having to develop an appreciation of changing tax regimes to determine, for example, whether it is required to establish a local entity in order to supply cross-border services.

Figure 13 provides some additional evidence, by drawing out some specific examples of the regulations and restrictions that are captured in each of the five categories of the STRI. It does so for engineering services, across a selection of the UK's largest trading partners for environmental goods and total services (as previously shown in Figure 9).

It can be seen that even for large global markets such as the USA, France and Italy, there are a number of restrictions that could act as a barrier to the international trade of engineering services. In France for example, companies must establish a local presence in order to supply cross-border services, and in the USA, Italy and China there is an explicit preference for local suppliers in public procurement.

Figure 13: Example regulations and restrictions affecting the international trade of engineering services

	United Kingdom	United States	Germany	France	Italy	China
Local presence is required for cross- border supply (cat 1)	No	No	No	Yes	No	No
Foreign professionals are required to take a local examination (cat 2)	No	Yes	No	No	Yes	Yes
Foreign suppliers are treated less favourably regarding taxes and eligibility to subsidies (cat 3)	No	Yes	No	No	No	No
Public procurement: Explicit preferences for local suppliers (cat 3)	No	Yes	No	No	Yes	Yes
Minimum capital requirements (cat 4)	No	No	No	Yes	Yes	No
Cost to obtain a business visa (USD) (cat 5)	124	160	91	67	90	81

Source: OECD STRI⁽⁷⁹⁾



3.4 The gravity framework

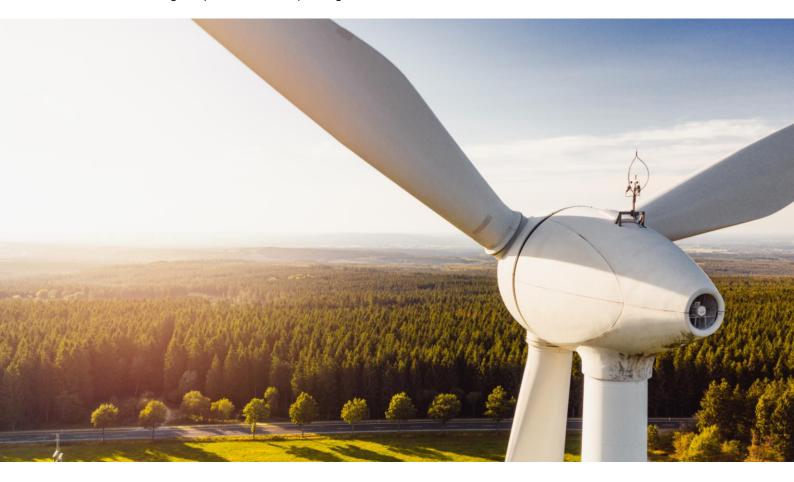
The gravity framework provides important context for interpreting and analysing barriers to trade. In particular, the gravity model is a widely used model for explaining bilateral trade flows of goods and services. (80) The gravity equation shows that international trade flows are very well explained by two key factors:

- i. distance, and
- ii. the size of the importing and exporting economy.

This is important context when analysing barriers to trade, as reductions in trade barriers will likely be most effective when they are undertaken by relatively large and/or geographically close economies. In Figure 9 for example, it can be seen that there is significant consistency in the UK's largest export markets for both environmental goods and total services. In both cases, the USA was the UK's largest export market in 2019, accounting for around 20 percent of total exports; other key markets include Germany, France and China. Given the success of the gravity model in explaining trade

flows, it is likely that changes to regulations and restrictions on these markets will have a more significant impact on the UK's trade of environmental services than changes in smaller or more distant markets.

Interestingly, the OECD (2017)(81) estimates a gravity model to explain the trade in "core" environmental services (discussed in section 2.2.1 above). The authors' model includes STRI scores for sectors such as architecture, construction and engineering as explanatory variables, alongside variables capturing distance and size of the economy. The authors find that higher STRI scores for these services are correlated with lower trade of core environmental services. This provides evidence that the restrictions included in the STRI index (e.g. as shown in Figures 12 and 13 above) can act as barriers to trade in practice. It also shows that barriers to trade for activities such as architecture and engineering can restrict the trade of core environmentally services (narrowly defined), indicating that there is a complementarity between the different types of environmental services.

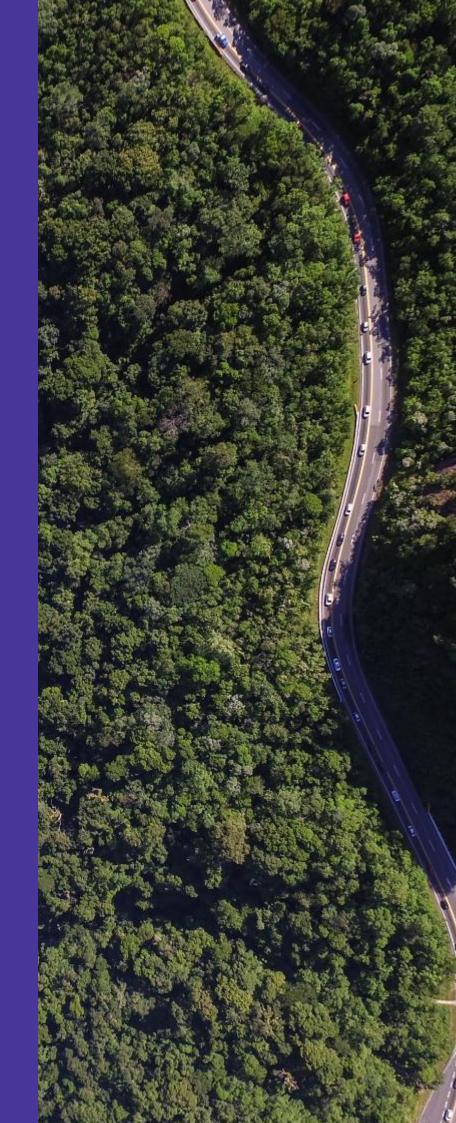


Source: (80) For example, Head & Mayer (2013): Gravity Equations: Workhorse, Toolkit and Cookbook.

(81) OECD, 2017. <u>Trade in Services Related to the Environment</u>



Recent approaches to liberalising the trade in environmental services



4.1 Overview

This section considers recent approaches to liberalising the international trade in environmental services, including multilateral negotiations and trade agreements. It reviews the evidence in the literature regarding some of the benefits and limitations of these different approaches, although it is beyond the scope of the study to consider all possible approaches, to undertake a detailed assessment of each approach, or to make any policy recommendations.

At the multilateral level, environmental goods and services first became part of the negotiating agenda at the Doha Round of negotiations in 2001. (82) Indeed, under the Doha Declaration, the reduction or elimination of barriers to trade in environmental goods and services was amongst a list of factors on which there must be agreement before the package of negotiating results became final. (83) Ultimately, however, WTO members were unable to conclude negotiations under the Doha Round, in part due to disagreements over which goods and services should be considered environmental".⁽⁸⁴⁾ Indeed, the OECD (2017) argues that the failure to reach agreement sheds doubt on the feasibility of liberalising environmental goods and services trade on a multilateral basis under a single-undertaking approach. (85)

At the regional and bilateral level, there has been an increase in the number of Regional Trade Agreements (RTAs) that include environmental provisions, with some RTAs including dedicated environmental chapters. (86) The evidence shows, however, that environmental chapters often include only limited or vague commitments to liberalise trade in environmental goods and (in particular) services.

Recently however, negotiations have begun between several countries over an Agreement on Trade Change, and Sustainability (ACCTS). (87) The ACCTS has the potential to liberalise the international trade in environmental goods and services, as it proposes to substantially reduce relevant barriers to trade, and to extend the agreed concessions to all WTO members on a most favoured nation basis. As noted by the IISD, environmental services have received little attention in major trade negotiations to date, and the ACCTS therefore represents a notable innovation.(88)

The final approach to liberalising the trade in environmental services considered in this section is international collaboration over relevant regulations and standards. This approach has been a particular focus in the area of sustainable finance. Indeed, various international organisations such as the Securities International Organisation of Commissions (IOSCO) and the International Financial Reporting Standards Foundation (IFRS) are working to establish and encourage global standards and definitions. These approaches represent potentially important developments for the international trade in sustainable finance, and may provide lessons for other environmentallyrelated services.



- Source: (82) IISD, 2014. Trade and Green Economy: A handbook (Third Edition)
 - (83) IISD, 2014. Trade and Green Economy: A handbook (Third Edition)
 - (84) OECD, 2017. Trade in Services Related to the Environment
 - (85) OECD, 2017. Trade in Services Related to the Environment
 - (86) George 2014, "Environment and Regional Trade Agreements; Emerging Trends and Policy Drivers", OECD Trade and Environment Working Papers, No. 2014/02, OECD
 - (87) For example, New Zealand Ministry of Foreign Affairs and <u>Trade Agreement on Climate Change, Trade and Sustainability (ACCTS) negotiations</u>
 - (88) IISD. Time to ACCTS? Five countries announce new initiative on trade and climate change.



4.2 Recent developments at the WTO

Negotiations continue amongst WTO members to achieve higher levels of market access for services within the overall GATS framework. (89) Such negotiations take place with the WTO's Council for Trade in Services, meeting in "Special Session". which has included submissions relating to environmental services. In September 2019, a proposal was tabled by Australia, Canada, Mexico, New Zealand and Switzerland which expressed interest in improving the level of market access commitments to environmental services under the GATS. (90) The submission highlighted technological advances have opened opportunities for the international trade of services under mode 1 (see Figure 10 above), and expressed the hope that members' GATS schedules could be improved to (at least) reflect the current level of openness for environmental services that are applied in practice.

The UK Government is a co-sponsor of an exploratory paper recently submitted to the Council for Trade in Services – Special Session regarding environmental

services. (91) The exploratory paper is not yet publicly available, although in an October 2020 statement, the UK Government indicated that improvements could be made to the level of GATS commitments in "environmental and other related services". The statement further noted that the UK Government recognises that there are a "wide range of relevant services beyond those captured in CPC 94" – i.e. beyond the core environmental services discussed in Section 2 above – and that improvements to GATS commitments in both "core environmental services and the related sub-sectors set out in the exploratory paper" could have a "profoundly liberalising effect".

It is therefore possible that there will be developments regarding the level of commitments made to environmental services under the GATS, potentially with a broadening of the services included within countries' definitions of environmental services.



4.3 Regional trade agreements (RTAs)

As noted by the IISD (2014), (92) the number of RTAs bilateral trade agreements has grown substantially in recent decades. At the same time, there has also been an increase in the number of RTAs that include environmental "provisions", countries which to increase through agree cooperation and negotiate environmental commitments that go beyond multilateral agreements. (93) As noted by Morin and Gauthier Nadeau (2017)⁽⁹⁴⁾ a number of recent RTAs devote entire chapters to environmental protection.

Importantly, however, environmental provisions are much broader than the promotion of trade in environmental goods and services. As detailed by George (2014), (95) environmental provisions in RTAs can include a broad range of areas, including:

- A commitment to uphold environmental law, and not to weaken it to attract trade or investment.
- General and specific exceptions based on GATT Article XX and GATS Article XIV for the protection of human, animal and plant life.
- References to the environment in the preamble to the agreement.
- More substantive environmental provisions, such as environmental cooperation and dispute settlement arrangements.

Source: (89) See: WTO | Service Negotiations

(90) See: WTO | Service Negotiations

(91) GOV.UK | UK Statement to the WTOs Council For Trade in Services Special Session

(92) IISD, 2014. Trade and Green Economy: A handbook (Third Edition)

(93) George, 2014. "Environment and Regional Trade Agreements: Emerging Trends and Policy Drivers", OECD Trade and Environment Working Papers, No. 2014/02, OECD Publishing, Paris.

(94) Morin & Gauthier Nadeau, 2017. Environmental Gems in Trade Agreements: Little-known Clauses for Progressive Trade Agreements

(95) George, 2014. "Environment and Regional Trade Agreements: Emerging Trends and Policy Drivers", OECD Trade and Environment Working Papers, No. 2014/02, OECD Publishing, Paris.





4.3 Regional trade agreements (RTAs) (cont.)

George (2014)⁽⁹⁶⁾ investigates the main objectives of OECD member countries for including environmental provisions in RTAs and finds that the three most common objectives are:

- Ensuring that countries do not relax their environmental laws to attract trade or investment.
- Promoting globally sustainable development.
- Ensuring that trade liberalisation does not damage, or contributes positively to, environmental protection.

Notably, George (2014)⁽⁹⁷⁾ finds that "promoting trade in environmental goods and services" is generally given a much lower importance by OECD members than many other environmental objectives, such as those listed above. Indeed, in their review of the environmental provisions included across a large number of RTAs, Morin and Gauthier Nadeau (2017)⁽⁹⁸⁾ also find that whilst many include a "vague commitment" to encourage trade in environmental goods, very few include specific provisions on this matter. The authors note that this is "surprising" in light of the lengthy plurilateral discussions in the WTO to reach an agreement on environmental goods.

Specific provisions relating to environmental services appear to be less common based on the evidence reviewed as part of this study. For example, the UN Environment and IISD Sustainability Toolkit for Trade Negotiators states that several RTAs have committed parties to work towards the liberalisation of trade in environmental goods, "but not usually services". (99) The OECD (2017)(100) also notes that negotiations to date have largely concerned environmental goods, "leaving the issue of environmental services by and large unaddressed".

The recent agreement between the United States, Mexico and Canada ("USMCA"), signed in November 2018, provides an interesting example of the extent to which environmental provisions in RTAs are considerably broader than the trade of environmental goods and services. Indeed, the USMCA includes a dedicated environmental chapter (Chapter 24), which includes commitments in a range of areas such as fishing subsidies, illegal shipments of endangered

species, and the reduction of marine litter. President Biden's most senior trade negotiator, Katherine Tai, has pledged robust enforcement of the environmental provisions in USMCA (although she has also stated that a lack of explicit climate provisions in the agreement is a "glaring omission"). Notably, however, the environmental chapter of USMCA specifies only the following four clauses relating to environmental goods and services (Article 24.24): (103)

- The Parties recognise the importance of trade and investment in environmental goods and services, including clean technologies, as a means of improving environmental and economic performance, contributing to green growth and jobs, and encouraging sustainable development, while addressing global environmental challenges.
- Accordingly, the Parties shall strive to facilitate and promote trade and investment in environmental goods and services.
- The Environment Committee shall consider issues identified by a Party related to trade in environmental goods and services, including issues identified as potential non-tariff barriers to that trade. The Parties shall endeavour to address any potential barriers to trade in environmental goods and services that may be identified by a Party, including by working through the Environment Committee and in conjunction with other relevant committees established under this Agreement, as appropriate.
- The Parties shall cooperate in international fora on ways to further facilitate and liberalise global trade in environmental goods and services, and may develop cooperative projects on environmental goods and services to address current and future global environmental challenges.

Source

⁽⁹⁶⁾ George, 2014. "Environment and Regional Trade Agreements: Emerging Trends and Policy Drivers", OECD Trade and Environment Working Papers, No. 2014/02, OECD Publishing, Paris.

⁽⁹⁷⁾ George, 2014. "Environment and Regional Trade Agreements: Emerging Trends and Policy Drivers", OECD Trade and Environment Working Papers, No. 2014/02, OECD Publishing, Paris.

⁽⁹⁸⁾ Morin & Gauthier Nadeau, 2017. Environmental Gems in Trade Agreements: Little-known Clauses for Progressive Trade Agreements

⁽⁹⁹⁾ See: Other Environmental Commitments: A Sustainability Toolkit for Trade Negotiators

⁽¹⁰⁰⁾ OECD, 2017. Trade in Services Related to the Environment

⁽¹⁰¹⁾ IISD. For discussion, see: Weighing up the Environmental Cooperation Agreement under the Canada-United States-Mexico Agreement

^{(102) &}lt;u>Trade chief Katherine Tai makes climate change focus of her first speech - Axios</u>

⁽¹⁰³⁾ See e.g. Global Affairs Canada.



4.3 Regional trade agreements (RTAs) (cont.)

The environmental chapter of the 2018 Comprehensive and Progressive Agreement for Trans-Pacific Partnership ("CPTPP") similarly contains relatively limited detail regarding barriers to trade in environmental goods and services. (104) Again, the chapter includes only four clauses relating to the trade in environmental goods and services, including a general statement that "the Parties shall endeavour to address any potential barriers to trade in environmental goods and services that may be identified by a Party" (Article 20.18).

Therefore, despite the increase in environmental provisions within RTAs, the examples above indicate that the level of commitments to environmental goods and (in particular) services can be limited.

Notably, however, negotiations have recently begun between six countries (Costa Rica, Fiji, Iceland, New Zealand, Norway and Switzerland) on an Agreement on Climate Change, Trade and Sustainability (ACCTS). (105) The ACCTS proposes to substantially reduce barriers to trade in both environmental goods and services, and to extend the agreed concessions to all WTO members on a most favoured nation basis. It is envisaged that the ACCTS will be a "living agreement", such that issues not agreed in the initial phase of negotiations can still be picked up and included at a later date, potentially broadening the scope of the agreement. (106) Further, once initial negotiations on ACCTS have concluded, it is intended that other WTO members can also join the agreement, subject to meeting the required commitments.

As noted by the IISD, environmental services have received little attention in major trade negotiations to date, such that including services in the ACCTS is a "notable innovation".⁽¹⁰⁷⁾



4.4 Collaborative approaches to international regulation and standards

Another approach to liberalising and promoting the international trade in services is to develop collaborative approaches to the relevant regulations and standards across jurisdictions. This approach has been a focus in financial services, (108) and of particular relevance to this paper, in the emerging area of sustainable finance. Sustainable finance provides an interesting example of an area where organisations have already sought to address trade-related issues in terms of international regulation and standards, and may provide lessons for other environmentally-related services.

UK Finance (2021) considers approaches taken by policy makers to promote the international trade in financial services. It notes that where services are traded through mode 3 - i.e. through the establishment of a local commercial presence (see section 3.2 above) - regulatory issues do not explicitly arise, as the foreign firm is subject to local requirements and supervised in the same way as domestic firms. Regulatory issues can arise, however, when services are provided under mode 1 (i.e. cross-border trade), as the foreign firm is outside the jurisdiction of the importing economy. The report

highlights three approaches taken by global jurisdictions to address such issues:

- Recognition based approaches: these approaches acknowledge that the standards in a foreign country are adequate to allow domestic customers to be supplied by firms from that jurisdiction. These approaches address the concern that exporting firms should be held to similar standards as local firms. Various terms are used to describe such approaches, including 'deference', 'equivalence' and 'mutual recognition'.
- Informed customer models: these models allow defined types of customers to select an appropriate provider – either domestic or foreign – on the grounds that they have adequate knowledge to judge their own needs.
- Intermediated services models: these models provide exemptions to allow foreign firms to provide services to local clients, where a local firm is involved as an intermediary to ensure the application of relevant local rules and requirements.

Source: (104) CPTPP text and associated documents | Australian Government | Department of Foreign Affairs and Trade

(105) For example, New Zealand Ministry of Foreign Affairs and <u>Trade Agreement on Climate Change, Trade and Sustainability (ACCTS) negotiations</u> and <u>IISD Time to ACCTS?</u>
<u>Five countries announce new initiative on trade and climate change.</u>

(106) For example, New Zealand Ministry of Foreign Affairs and <u>Trade Agreement on Climate Change, Trade and Sustainability (ACCTS) negotiations</u> and <u>IISD Time to ACCTS?</u> Five countries announce new initiative on trade and climate change.

(107) IISD Time to ACCTS? Five countries announce new initiative on trade and climate change.

(108) UK Finance, 2021. International trade in financial services: Defining trade policy for banking, payments and related financial services.



4.4 Collaborative approaches to international regulation and standards (cont.)

UK Finance (2021) notes that developing trust between jurisdictions is central to all of these approaches. It argues that such trust can be developed and maintained through "regulatory dialogue" between states, and close cooperation between the public authorities and agencies involved in regulation and supervision. It further notes that recognition-based approaches generally require deeper links between regulators and supervisors, with a focus on developing compatible or consistent approaches to regulations and/ or standards (i.e. "rulebooks").

The importance of a compatible and consistent set of standards in supporting international trade has been considered by various organisations in the context of sustainable finance specifically. Schroders (2021) considers the approaches taken to the regulation and supervision of sustainable finance in major international jurisdictions. (109) The report notes the importance of a globally aligned set of rules and the need to avoid overlapping and duplicative rules.

The International Organisation of Securities Commissions (IOSCO) (2020) identified a need for greater comparability of sustainability-related financial disclosures. (110) The research found that there are disparities between international jurisdictions that could hinder international financial activity and capital flows, and reduce companies' ability to conduct business in multiple countries (i.e. act as a barrier to trade).

To address these issues, IOSCO has established a Sustainability Task Force, working alongside the International Financial Reporting Standards (IFRS) Foundation and other stakeholders, with three priority areas for improvements in sustainability-related financial disclosures (IOSCO, 2021):(111)

- Encouraging globally consistent standards: encouraging progress towards a globally consistent set of international standards for sustainability-related disclosure across jurisdictions.
- Promoting comparable metrics and narrative: promoting an emphasis on industry-specific, quantitative metrics in sustainability-related disclosures and the standardisation of supporting narrative information.
- Coordinating across approaches: driving

international consistency of sustainability-related disclosures.

Alongside this work, the IFRS are working towards the establishment of a Sustainability Standards Board (SSB) to develop and maintain a global set of sustainability-reporting standards, which will initially on climate-related risks.(112) As such approaches are still in development, the impact on international trade and investment in sustainable finance is not yet known. However, these approaches, focussed on international consistency in and rules. represent regulation important developments in the liberalisation of international trade in sustainable finance, and may provide lessons for other environmentally-related services.



ource: (109) Schroders (2021). How the world is warming to sustainable investing: developments in regulation and investor demand.

(110) IOSCO (2020) Sustainable finance and the role of securities regulators and IOSCO: Final report.

(111) See e.g. IOSCO Media Release "IOSCO/MR/05/2021"

(112) IFRS (2020) Consultation paper on sustainability reporting.





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