CHAPTER

Why non-tariff measures matter for sustainable development

As indicated in the Introduction, non-tariff measures (NTMs) are already prevalent in the Asia-Pacific region, and are becoming more so as developing countries in the region and beyond enhance their technical regulatory frameworks. The key questions are whether NTMs contribute to sustainable development, and whether these contributions outweigh the trade costs associated with NTMs. As such, this chapter explores how NTMs address the Sustainable Development Goals (SDGs). A detailed discussion on the effects of NTMs on trade, investment and economic development is presented in chapter 2.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future (United Nations, 2015). The 17 SDGs call for urgent action by all economies – developed and developing – in a global partnership. They recognize that ending poverty and other deprivations must go together with strategies that improve health and education, reduce inequality and spur economic growth – all while tackling climate change and working to preserve our oceans and forests (figure 1.1). Each Goal is subdivided into specific targets, and each target has one or more indicators.[1]

[1] For example, SDG 1 (End poverty in all its forms everywhere) includes 7 targets and 13 indicators. See https://sustainabledevelopment.un.org/content/documents/11803Official-List-of-Proposed-SDG-Indicators.pdf.

Figure 1.1 **The 17 Sustainable Development Goals**

Source: United Nations (2015).

The 2030 Agenda for Sustainable Development recognizes international trade as an engine for inclusive economic growth and poverty reduction, and as an important enabler for achieving SDGs (ESCAP, 2017). Trade and trade-related policies have a multifaceted link to SDGs. SDG 17 ("Partnerships for the Goals"), in particular, includes targets that seek to "promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system", "significantly increase the exports of developing countries" and "realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries". In addition to the trade-growth-economic development nexus, trade is strongly linked to SDGs that are related to health and safety, environment and climate, public security and peace. As such, broadly speaking, NTMs can directly contribute to sustainable development as policy instruments, or they can indirectly affect sustainable development through their impact on trade in goods or through their far-reaching positive and negative externalities. A good example of such a multifaceted impact of an NTM is described in a recent study of the effects of the anti-illegal, unreported and unregulated (IUU) fishing legislation imposed by the European Union against imports of seafood from Sri Lanka (box 1.1).

> *"NTMs have a multifaceted effect on sustainable development through direct and indirect impacts."*

Box 1.1

The effect on SDGs of the European Union import ban on seafood from Sri Lanka

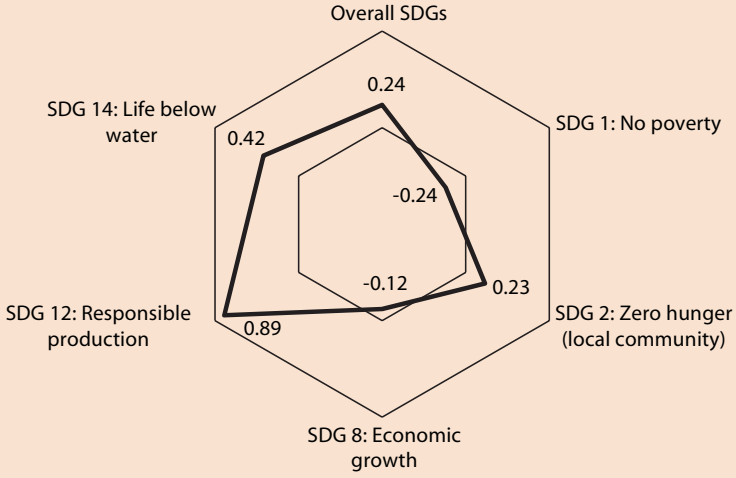
NTMs can have a direct impact on trade performance of trading partners. In addition to trade performance, NTMs may have direct and indirect linkages with SDGs of these trading partners. Sandaruwan and Weerasooriya (2019) explored the performance of the seafood export industry of Sri Lanka before, during and after the European Union instituted an import ban on Sri Lankan seafood because of its systematic failure to address IUU fishing. In addition, the authors developed indicators and measured the impact of the fish import ban on SDGs of stakeholders of the seafood industry in Sri Lanka.

Prior to the ban, the European Union was the single largest export market for Sri Lankan seafood. After the European Union instituted the import ban, Sri Lanka's market share in the European Union's seafood market dropped precipitously. As a direct result, domestic wholesale prices of fish plummeted. Furthermore, the number of employment opportunities in offshore fisheries decreased by 10%, and fishermen's household expenditure was reduced by 31%. As a remedial measure to income reduction, 90% of fishermen took loans from money lenders by mortgaging their properties; however, 25% were unable to settle their loans after two years.

To placate the European Union regulators, the Government of Sri Lanka instituted a number of domestic technical regulations that had significant and positive effects on sustainability. Because of the ban, all the relevant authorities in the fisheries sector of Sri Lanka worked effectively and achieved 82% of an Indian Ocean Tuna Commission compliance rate in 2017.[a] Due to the vessel monitoring system, awareness programmes for fishermen, boat inspections in the harbour and at sea, the movement of fishermen to foreign sea territories as well as the rate of fishermen arrested by foreign countries have declined by as much as 85% since the ban. The vessel monitoring system not only increased prevention of IUU fishing (SDG Targets 14.4 and 14.6), but also reduced the risk to fishermen who are now able to use it for distress calls, get weather information and fishing ground forecasting. In addition, the indirect effect of a local surplus meant that at the time of the ban, domestic consumer prices for seafood produce decreased, and boat crews were able to take 37% more catches home free of charge.

The study's SDG analysis revealed that the ban generated mixed effects on a selected set of SDGs (figure). The ban has had a positive impact on SDG 2 (No hunger), SDG 12 (responsible production), SDG 14 (Life below water), but a negative impact on SDG 1 (No poverty) and SDG 8 (Economic growth). This study recommended implementing further studies to determine the impacts of NTMs, and to adjust the nature of NTMs to generate holistic sustainable development across the world.

Figure. Impact of the European Union ban on SDGs in Sri Lanka



Note: The composite index developed by this study takes a value of +1 for maximum positive change and -1 for maximum negative change. As such, the overall finding of this study suggests that the net impact of the ban was positive.

[a] Indian Ocean Tuna Commission compliance. See https://www.iotc.org/compliance.

A. DIRECT EFFECTS

Even though tariffs and certain NTMs, such as certain subsidies (box 1.5), feature in the framework for SDGs, concrete quantifiable indicators associated with most NTMs are largely missing. To address this gap in examining the link between NTMs and SDGs, ESCAP and UNCTAD developed a methodology that allows assessment of how NTMs of economies in the Asia-Pacific region address SDGs directly.

For this purpose, targets within SDGs were examined to determine which internationally traded products play a role in their achievement and what regulations imposed on such products may have a direct impact on the achievement of the target. As part of the mapping, SDG targets were linked to (a) related products, (b) NTMs that applied to these products and, in some cases, (c) relevant keywords. A measure was considered to have direct linkage to an SDG if: (a) it had a clearly stated SDG Target-related objective, or (b) it was not likely to have any objective other than the one that was relevant to the SDG Target (as in the case of trade in endangered species, narcotic drugs, cultural heritage items, arms and other weapons). Thus, the established linkages describe an intended (and positive) impact of NTMs on the achievement of SDG Targets (stated or implied).

For an illustrative example, take SDG Target 3.5, "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol". This SDG Target specifically mentions "alcohol" and, as such, NTMs in the UNCTAD TRAINS NTM database that target alcohol for consumption were shortlisted. Next, NTM categories that could ostensibly address SDG Target 3.5 were examined. For example, many countries now require labels (ICNTM classification B31 – labelling requirements) to include warnings such as "Excessive drinking is harmful to health" (China) or "Alcohol is not for children and teenagers up to age 18, pregnant and nursing women, or for persons with diseases of the central nervous system, kidneys, liver, and other digestive organs" (Russian Federation). For each economy in the UNCTAD TRAINS NTM database, such NTMs on food-grade alcohol were thus deemed to address SDG Target 3.5.

To illustrate the instances of when keywords were necessary, consider NTM classified as B82 in ICNTM, "testing requirement", for motor vehicles. Because the ICNTM classification does not go into detail of what those requirements are, without looking into the description of each measure, it would have been unclear whether motor vehicle testing requirements were intended for safety (addressing Target 3.6 – deaths due road traffic injuries) or air pollution reduction (addressing Target 11.6, ambient air pollution). Examination of keywords in the measure description, for example "carbon monoxide", "emission test", "emission compliance", in combination with a product type (motor vehicles) allowed the creation of an unambiguous relationship between the measure-product combination and SDG Target 11.6.

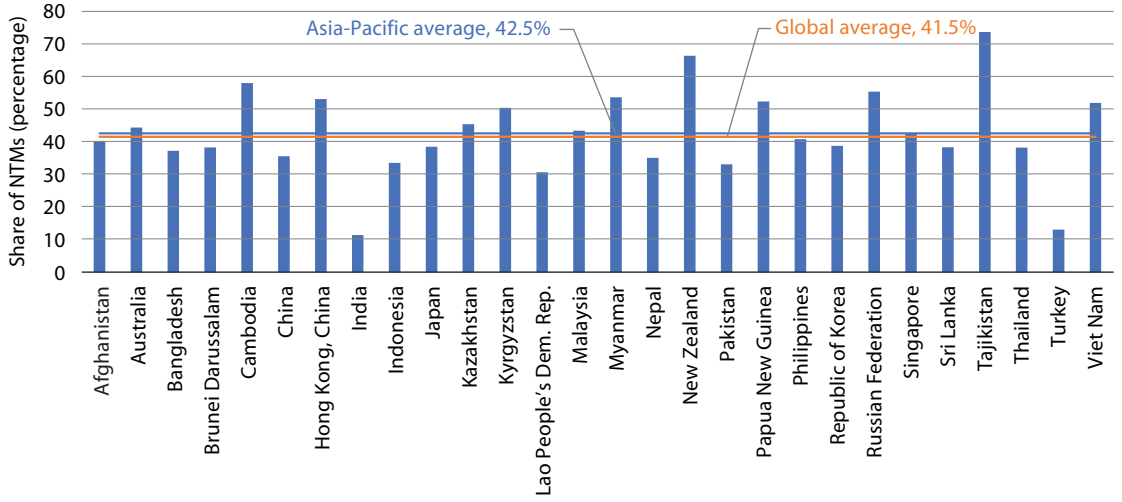
Using this method, a detailed concordance table was developed between individual Targets, affected products and NTM classification (and keywords). This concordance table was then used to link individual measures in the UNCTAD TRAINS NTM database (more than 60,000 measures from 88 economies, counting the European Union as a single economy) with SDGs and individual Targets. For details of the methodology, see Kravchenko and others (2019). A brief overview of the findings of this analysis is presented below.

> *"The vast majority of NTM categories that have a direct (and positive) impact on SDGs are technical measures, namely SPS and TBT."*

The vast majority of NTM categories evaluated for having a direct (and positive) impact on SDGs were technical measures as well as export-related measures targeting specific products. Non-technical measures were also present, such as, for example, measures under chapters H and J that restricted channels for importation and distribution of sensitive and controlled goods such as medicines, narcotic drugs and precursors, alcohol and guns (relevant to SDG 3 on health and SDG 16 on crime and peace). Another example is NTM code E315 prohibiting importation of products infringing patents or other intellectual property rights (SDG 16 Target of reducing illicit financial flows).

The resultant matrix enabled an evaluation of the extent to which NTMs in each economy address specific SDGs (figure 1.2). In line with *a priori* expectations, India has the lowest share of NTMs directly addressing SDGs as most of its measures are non-technical measures (refer to figure 5 in the Introduction). New Zealand, on the other hand, has

Figure 1.2 **Share of NTMs that directly address SDGs**



Source: ESCAP calculations based on UNCTAD TRAINS database and methodology developed by ESCAP and UNCTAD (Kravchenko and others, 2019).

one of the highest shares of NTMs that directly address SDGs, as more than 97% of its measures are technical measures. Similarly, Tajikistan has a very high share of NTMs addressing SDGs, but unlike New Zealand, with only very few NTMs in place (there are more than 3,000 individual NTMs in New Zealand, and only 49 in Tajikistan, according to the UNCTAD TRAINS database).

Indeed, there is a positive association between the share of NTMs that address SDGs and the share of technical measures (particularly SPS) of all NTMs imposed by an economy (figure 1.3). In general, albeit with a few notable exceptions, it also seems that the higher the propensity of imposing NTMs by an economy, the lower the share of NTMs addressing SDGs in that economy. Controlling for the number of measures and shares of SPS measures, economies in Asia and the Pacific have, on average, more than six percentage points of a higher share of NTMs addressing SDGs than economies outside of the region. This suggests that in Asia and the Pacific, economies address SDGs relatively more intensively by using NTMs than elsewhere.

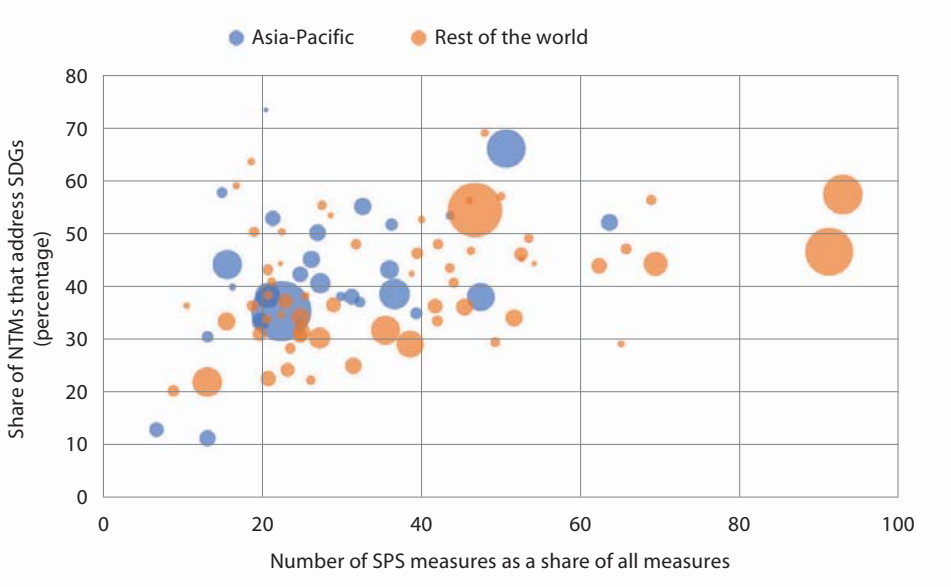
> *"The more intensive use of technical measures means they are more likely to be addressing SDGs."*

Figure 1.4 depicts the average share of NTMs in each economy in Asia and the Pacific, and the world, that have been identified as directly addressing SDGs across individual Goals. It should be noted, however, that a large share of NTMs addressing a particular Goal does necessarily indicate that NTMs are more effective in addressing that particular Goal. A large number of measures addressing an SDG, and which are relatively easy to comply with, may potentially be inconsequential in helping to achieve that Goal. For example, while there are many SPS measures, their relative individual contribution to the achievement of SDG 3 (Good health and well-being) may be rather limited. At the same time, one or a few individual NTMs can have a significant impact on SDGs. One clear example is the European Union's import ban on seafood from Sri Lanka, which resulted in the uptake of sustainable fishing practices in the country and in improved safety of fishermen at sea (box 1.1). As such, these limitations must be kept in mind when interpreting the findings.

The highest share of SDG-related NTMs in the Asia-Pacific region directly address Goals 2, 3, 12 and 16. The share of NTMs addressing SDGs in Asia and the Pacific roughly follows the global pattern, although Goals 3, 12 and 16 are addressed by NTMs relatively more intensively than on average, worldwide.

Figure 1.3

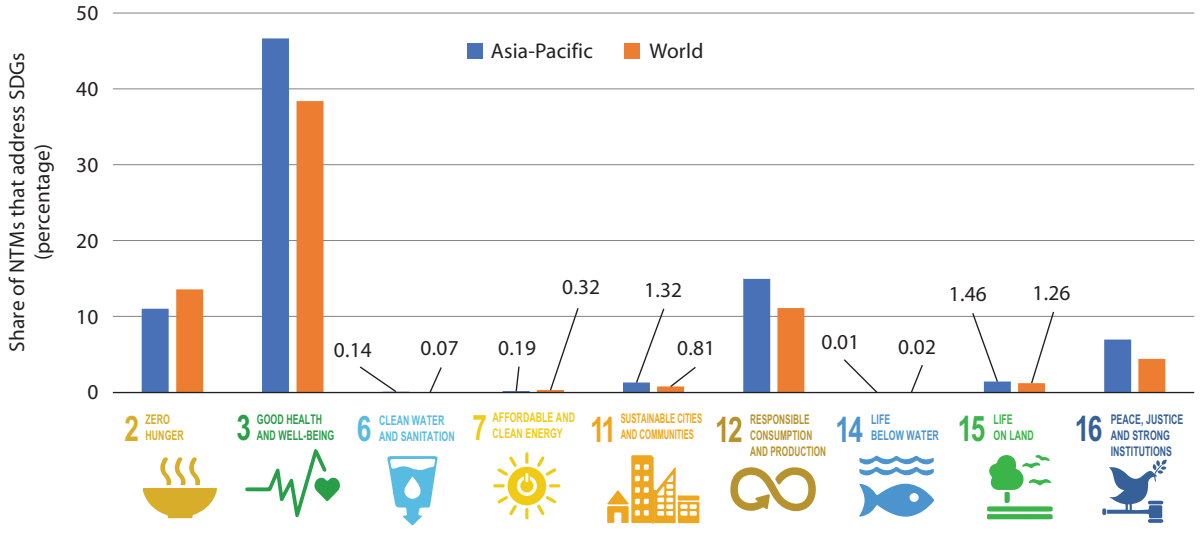
Share of SPS measures vis-à-vis share of NTMs that address SDGs



Source: ESCAP calculations based on UNCTAD TRAINS database and methodology developed by ESCAP and UNCTAD (Kravchenko and others, 2019).

Figure 1.4

Distribution of NTMs that directly address SDGs, by Goal



Source: ESCAP calculations based on UNCTAD TRAINS database and methodology developed by ESCAP and UNCTAD (Kravchenko and others, 2019).

"The highest share of SDG-related NTMs in Asia and the Pacific directly address Goals 2 (Zero hunger), 3 (Good health and well-being), 12 (Responsible consumption and production) and 16 (Peace, justice and strong institutions)."

It should be noted that (as discussed further below) most of product-NTM pairs are relevant to more than one SDG. To avoid overstating the linkages between NTMs and SDGs, a conscious effort was made to create a one-to-one correspondence between one product-NTM pair and only one SDG, i.e., the most directly affected SDG.[2] However, in some instances of recorded measures in UNCTAD TRAINS database, stated objectives and regulated products were relevant to more than one SDG; as a result, some double counting was unavoidable.[3]

Some prominent examples, where NTMs have strong potential to contribute to the achievement of SDGs as well as some other public policy objectives, are briefly described below.

1. Goal 3: Good health and well-being

This Goal aims to ensure healthy lives and promote well-being for everyone at all ages. Among its 13 targets, 10[4] are directly addressed by NTMs imposed on relevant groups of goods. Within these targets, the main issues addressed by NTMs are generally related to the following issues:

- Improving access to medicines and health-care products, while ensuring their safety and predictable efficacy;
- Reducing human consumption of products that are undeniably harmful to human health (e.g., narcotics and tobacco);
- Food safety;
- Increasing consumption of healthier foods, while reducing consumption of foods or additives that can contribute to the occurrence of non-communicable diseases (i.e., food quality and labelling);
- Reducing injuries and deaths on roads (i.e., motor vehicle safety);
- Maintaining a safe living environment and reducing exposure to harmful substances (e.g., hazardous chemicals).

"The largest share of all SDG-related NTMs address SDG 3 (Good health and well-being)."

As noted above, by far the largest share of all SDG-related NTMs address this Goal. Such NTMs include the regulation of medicines (quality, labelling, storage, certification, licensing, traceability, registration of goods/importers, importation and distribution channels etc.), food safety (primarily SPS measures), nutrition labelling of packaged foods and health warnings on alcohol and tobacco products, technical regulations on vehicle safety, restrictions and price control measures for trade in alcohol and tobacco products etc. While a detailed analysis of the impact of NTMs on individual health-related indicators is beyond the scope of this report, illustrative examples are presented in box 1.2.

[2] Thus, this approach is unlike the analysis, presented in box 1.1, of the European Union's import ban on seafood from Sri Lanka, which examined all aspects of the sustainable development that were affected by NTM, both directly and indirectly.

[3] For example, one regulation may impose controls on transboundary movement of narcotics, drugs and guns – goods that are relevant to SDGs 3 and 16 – while another may regulate hazardous chemicals in general and chemicals suitable as precursors for weapons of mass destruction in particular (SDGs 12 and 16).

[4] Target 3.1- Target 3.9 and Target 3.a.

Box 1.2

The impact of NTMs on selected SDG indicators

While numbers of NTMs provide an indication of how economies try to address their public policy objectives by using trade policy, the outcomes of these NTM policies are not always straightforward. The level of development, environmental factors, geographical location as well as non-NTM country-specific factors play a major role. Stringency of NTMs as well as the degree to which the regulations are enforced, rather than mere number of NTMs are also important. Additionally, as noted above, many NTMs can simultaneously have an impact on several Goals, and not always positively. Furthermore, some SDG indicators only consider the existence of NTMs rather than their effect on sustainability, such as Indicator 12.4.1, "Number of parties to international multilateral environmental agreements on hazardous waste". As such, while signing an agreement on hazardous waste will most likely have a positive impact on sustainable development, that impact itself is not a measurable indicator of sustainability per se (as opposed to, for example "population below the international poverty line"). Finally, data for some indicators are yet to be collected on the global scale. Nevertheless, some illustrative conclusions can be made, based on selected indicators.

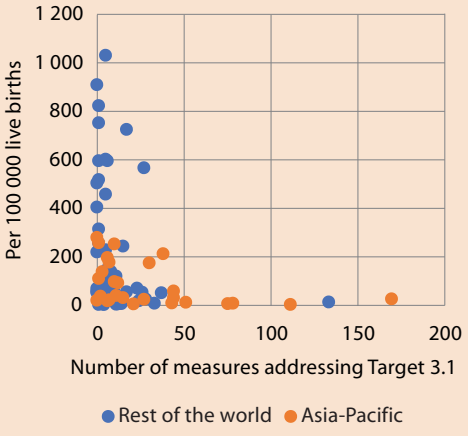
In the case of Indicator 3.1.1, "Maternal mortality ratio", figure (a) shows that countries which regulate relatively more intensively generally have lower instances of maternal mortality. At the same time, keeping in mind that NTMs incur costs for traders (see chapter 2), the relationship suggests that some economies, particularly from the Asia-Pacific region, may end up "over-regulating" and there may be scope to reduce the number of regulations to drive down costs and availability of products addressing Target 3.1.

Conversely, figure (b) shows a positive relationship between number of NTMs addressing Target 3.5 and SDG indicator 3.5.2.,"Annual alcohol consumption per capita, aged 15 and above". While this may in part be due to issues of simultaneity (i.e., economies with high per capita alcohol consumption regulate more to bring it down), additional research suggests that in some cases trade policy is used for the benefit of local producers (i.e., NTMs that are NTBs). In this case other, non-trade-related policies, such as education campaigns and restrictions of consumption in public spaces, may be more appropriate (Vigato and Kravchenko, 2018).

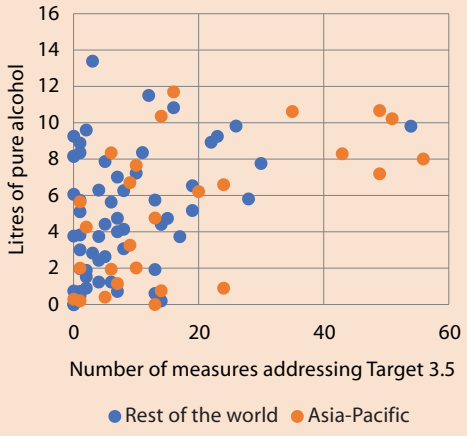
Finally, the relationships between the number of NTMs addressing Target 3.4 (non-communicable diseases) vis-à-vis Indicator 3.4.1, "Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease" (figure (c)) suggests that while the number of NTMs is negatively associated with incidence of non-communicable diseases of both sexes, the impact on the mortality rate is more pronounced for females than males. A more detailed analysis at the country level, however, is required in order to draw an accurate conclusion for each, particularly when conducting a sustainability assessment of measures.

Figure. The relationship between selected SDG Indicators (latest available year) and the number of measures addressing relevant Targets

(a) 3.1.1. Maternal mortality ratio

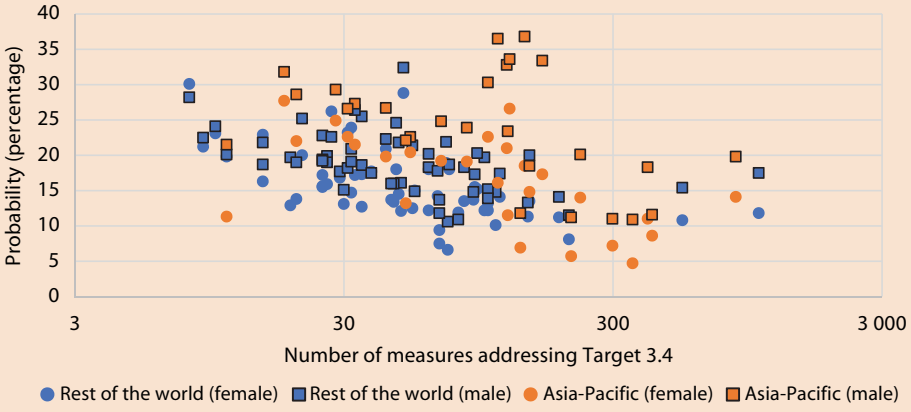


(b) 3.5.2. Annual alcohol consumption per capita, aged 15 and above



Box 1.2 *(continued)*

(c) 3.4.1. Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease



Source: ESCAP calculations based on the UNCTAD TRAINS database, United Nations Global SDG Database and methodology developed by ESCAP and UNCTAD (Kravchenko and others, 2019).

2. Goal 12: Responsible consumption and production

"NTMs that arise due to international agreements and address SDG 12 (Responsible consumption and production) are prevalent, highlighting the need for international collaboration to achieve the 2030 Agenda for Sustainable Development."

SDG 12 aims to ensure sustainable consumption and production patterns. Targets within this Goal, for which NTMs are relevant, aim to address such issues as resource efficiency of goods and production processes, reduction of resource waste, environmentally and socially responsible company practices and public procurement, sound management of hazardous chemicals and waste etc. The TRAINS database prominently features regulations that are relevant to Targets 12.4[5] and 12.5,[6] which are aimed at controlling and restricting transboundary movement of hazardous substances and waste, ozone-depleting substances, persistent organic pollutants and hazardous pesticides. This is largely since the signing of international agreements, such as the Basel Convention, Stockholm Convention, Rotterdam Convention, Minamata Convection and Montreal Protocol, which is a good illustration of the important role played by international collaboration in achieving SDGs. Trade in these goods is primarily regulated by technical regulations (product certifications, import/export permits, registration of goods/traders, traceability, labelling, marking, packaging etc.) as well as export controls, licensing and prohibitions. Recently, limitations have also been placed on the use and importation of single-use plastics, plastic waste and products that are sources of microplastics (box 1.3).

[5] 12.4 – By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

[6] 12.5 – By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

Box 1.3

NTMs and plastic waste

Currently, approximately 300 million tonnes of oil-based plastic waste are produced every year (UNEP, 2018). A significant amount of plastic waste ends up in the oceans, having a detrimental effect on marine ecosystems and coastal communities. Most of this plastic waste enters the oceans in the Asia-Pacific region (Jambeck and others, 2015). If unaddressed, by 2050 there could be more plastic than fish in the oceans (WEF, 2016). Recognizing the problem, addressing plastic pollution in the ocean has been included in the 2030 Agenda for Sustainable Development in Target 14.1 (by 2025, prevent and significantly reduce marine pollution of all types, in particular from land-based activities, including marine debris and nutrient pollution), Indicator 14.1.1. (Index of coastal eutrophication and floating plastic debris density). It is widely acknowledged that regulating single-use plastics and microplastics is a major component in achieving this target (ESCAP, forthcoming). An increasing number of countries in the Asia-Pacific region and across the world are now introducing regulations addressing consumption, production and trade in single-use plastics and plastic waste.

Notably, the first country in the world to effectively ban the use of single-use plastic bags was Bangladesh. The rationale, however, was a disaster-risk reduction strategy – during a 1998 monsoon, it was estimated that clogging of 80% of city's runoff drains was caused by plastic bags (green page, 2016). As a result, two thirds of the country, including a large part of Dhaka, were under 12 inches of water for nearly two months. Following this disaster, the Cabinet banned the production and use of polyethylene shopping bags in Dhaka city from 1 January 2002. The penalty for importing plastic bags includes a prison term for up to 10 years and a hefty fine (though enforcement of the ban remains an issue).

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Mae Ramphueng Beach, Rayong, Thailand, May 2018

Perhaps the most stringent recent example of addressing single use plastics is in Kenya, where, since August 2017, producing, selling or even using plastic bags can result in four years in prison or a fine of up to $40,000 (Reuters, 2017). Prior to the ban, plastics were ubiquitous on the streets, and 3 out of 10 animals in abattoirs were found to have plastics in their stomachs (Watts, 2018). Eight months after the introduction of the ban, the number has gone down to 1 in 10, and the streets are much cleaner. This, however, came at a significant cost – it was estimated that up to 60,000 jobs were lost as a result – as Kenya was a major plastic producer and exporter in the region with 176 plastic-producing companies. Highlighting the need for regional cooperation, due to the ban, illegal imports from neighbouring countries began to emerge, and the Government of Kenya is urging its neighbours to institute similar bans (McCarthy, 2018).

While many developed countries remain better at ensuring that plastics and other waste do not end up in waterways through provision of adequate refuse collection mechanisms (and littering fines), recycling remains an issue. This was seemingly addressed through exporting waste plastic for recycling to other countries, most significantly to China; since 1992, China imported almost half of the worlds' plastic waste for recycling (Brooks, Wang and Jambeck, 2018). However, recognizing the detrimental effect these imports were having on its environment and air quality, in 2018 the Government of China banned the importation of plastic waste. Brooks, Wang and Jambeck (2018) estimated that over the coming decades, as many as 111 million tonnes of plastic

Box 1.3 *(continued)*

will have to find a new place to be processed or otherwise disposed of as a result of China's ban. The ban led exporters to seek other markets, and exports of plastic waste to other countries in the region, such as India, Indonesia, Malaysia and Thailand have skyrocketed. Expectedly, this resulted in deteriorating environmental situations in the recipient countries and generated backlash: following China's example, both Malaysia and Thailand have since banned the import of plastic waste (Daniele and Regan, 2019; Agence France-Presse, 2019).

Recognizing the detrimental effect of trade in plastic waste, on 11 May 2019 a total of 180 Governments (excluding the United States) adopted an amendment to the Basel Convention to include plastic waste in a legally-binding framework that will make global trade in plastic waste more transparent and better regulated, while also ensuring that its management is safer for human health and the environment (UNEP, 2019). According to this Agreement, exporting countries – including the United States – will now have to obtain consent from countries receiving contaminated, mixed or unrecyclable plastic waste (ICNTM classification chapter E – non-automatic licensing).

3. Goal 16: Peace, justice and strong institutions

Within Goal 16, Target 16.4 (Reducing illicit financial and arms flows), NTMs include those that are used to curb trade in arms, ammunitions, dual-use goods that could be used to make chemical, nuclear and biological weapons and their delivery systems as well as goods suitable for making improvised explosive devices. Import and export measures that are typical for regulating trade in controlled goods are prominent here, while some export measures are applied on a bilateral basis targeting specific countries.

Additionally, relevant to this target are NTMs aimed at controlling international trade in precious stones and metals as well as other valuable minerals, as such trade may generate illicit financial flows, which in turn may fuel all forms of human rights abuses and violence, and finance armed conflict. These NTMs typically consist of certification schemes that require companies engaged in such trade to implement due diligence with regard to the sources of traded goods, and to ensure full transparency and traceability of the entire supply chain of the minerals. One example featured in the TRAINS database is that of national regulations based on the standards of the Kimberley Initiative Certification Scheme for rough diamonds. Another notable example pertains to similar regulations for trade in tin, tungsten, tantalum and gold, such as the Dodd-Frank Act Section 1502 of the United States, detailing measures to ensure responsible sourcing of these four metals from the Democratic Republic of the Congo and its neighbouring countries.[7] Relevant measures affecting trade are inspection, certification and auditing of mine sites/smelters/refineries, mineral chain of custody tracking and mineral tracking databases (traceability), registration of exporters and importers, mineral export certification and permits, licencing, pre-shipment inspection, marking and transportation in tamper-proof containers. While these measures may in principle support achievement of SDG 16, they also make it more difficult to produce and trade, with a potential negative impact on other SDGs and targets. Caution should be exercised when introducing such NTMs as they can have unintended consequences (box 1.4).

> *"Short-sighted implementation of NTMs to address one Goal may have unintended adverse effects on other Goals."*

[7] The latter is not present in the TRAINS database, but it is likely that such measures will be recorded as more countries adopt related regulations. For example, from 1 January 2021, the European Union will enact Regulation (EU) 2017/821 of the European Parliament, and of the Council of 17 May 2017 laying down supply chain due diligence obligations for the European Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas.

Box 1.4

Controlling trade in conflict minerals: unintended consequences

Section 1502 of the United States Dodd-Frank Act was enacted in 2010 (mining.com, 2017). This regulation requires publicly traded companies to ensure that the raw materials (particularly tin, tungsten, tantalum and gold) they import to make their products were not tied to the conflict in the Democratic Republic of the Congo or its neighbouring countries. This was meant to ensure that "conflict mineral" proceeds did not contribute to civil wars or terrorism (in essence addressing SDG 16 – Peace and security). The legislation was largely successful through reducing militia revenue from mining of raw materials. However, it also produced unintended consequences, negatively affecting other aspects of sustainable development.

As a direct result of this legislation, it has been estimated that 8 to 10 million people who depended on mining experienced loss of income as some buyers avoided trade with those countries altogether, and artisan miners found it difficult to obtain required certification (Parker, Foltz and Elsea, 2016). This increase in poverty has further been identified as a key contributor to a sharp decrease in "consumption of infant health care goods and services." As a result, infant mortality in areas close to regulated mining sites increased by 143% since.

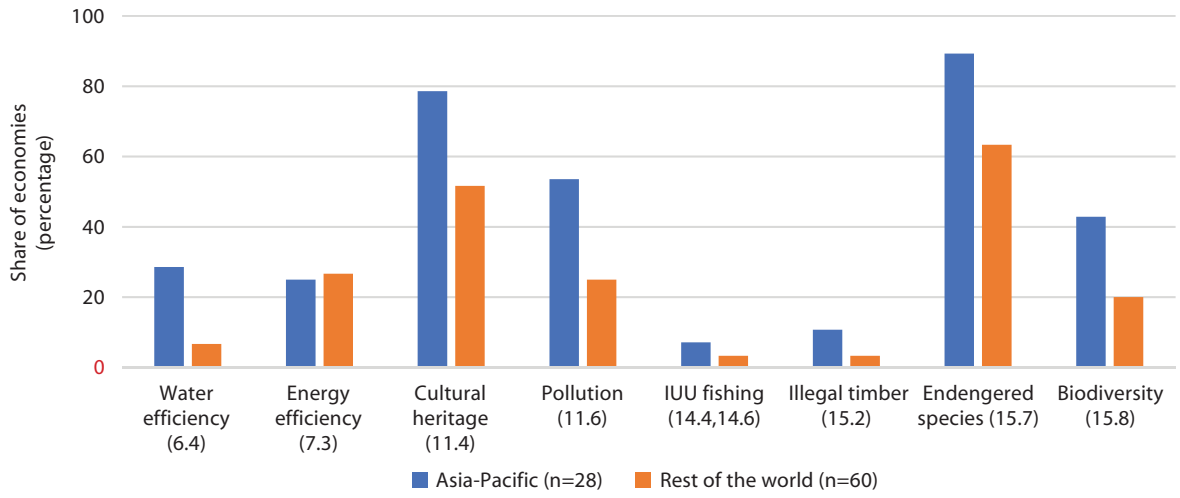
Other SDG Targets affected by NTMs

There are examples of other, less frequent measures for certain products that can potentially have a significant impact on other SDGs. Technical regulations on water and energy efficiency targeting water and energy using appliances, equipment and machines are relevant to Target 6.4 ("…substantially increase water-use efficiency across…") all sectors and Target 7.3 ("…double the global rate of improvement in energy efficiency…"). Reduction of pollutant and noise emissions from transport, machines and equipment used in the cities can contribute to Target 11.6 ("…reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality…"). NTMs can play a significant role in protecting the world's movable cultural heritage, which is relevant to Target 11.4 ("…protect and safeguard the world's cultural and natural heritage."). Trade-related measures described in the 2001 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) – which was adopted to facilitate sustainable sourcing of fish and to reduce the impact of fishing on the marine environment and on the health of fish stocks – are relevant to Target 14.4 ("…regulate harvesting and end overfishing, illegal, unreported and unregulated fishing…") and Target 14.6 ("…eliminate subsidies that contribute to illegal, unreported and unregulated fishing…"). Finally, NTMs are used to regulate trade in endangered species of flora and fauna (Target 15.7, "…end poaching and trafficking of protected species of flora and fauna…"), to curb trade in illegally and unsustainably harvested timber (Target 15.2, "…sustainable management of all types of forests…") and to control transboundary movement of the invasive species that may threaten biodiversity (Target 15.8, "…reduce the impact of invasive alien species…").

Figure 1.5 depicts the share of economies for which NTM data are available (88 globally, with the European Union counting as a single economy) and that have at least one NTM in place to address the targets described above. In all but target 7.3 (doubling the global rate of improvement in energy efficiency), the Asia-Pacific region is ahead of the rest of the world – i.e., more countries in this region have NTMs directly supporting these SDG targets. While most economies in the region use NTMs to address Target 15.7 (regulating trade in protected species) and, to a lesser extent, Target 11.4 (protecting cultural heritage), the lack of trade regulations addressing other feasible targets is a cause for concern.

> *"There is scope for member States in the region to address certain aspects of sustainable development through trade measures that are currently missing."*

Figure 1.5 **Share of economies with at least one NTM addressing specific SDG targets**



Source: ESCAP calculations based on UNCTAD TRAINS database and methodology developed by ESCAP and UNCTAD (Kravchenko and others, 2019).

For example, less than 50% of economies have at least one NTM addressing water and energy efficiency (Targets 6.4 and 7.3), and only approximately 10% have measures addressing IUU and illegal timber trade (Targets 14.4, 14.6 and 15.2). As such, there appears to be more scope for member States in the Asia-Pacific region to address these aspects of sustainable development through trade measures. Caution should be exercised, however, to ensure that any such measures do not place an unnecessary burden on compliant traders. Furthermore, any regulations must be non-discriminatory in nature, meaning both foreign and the domestic producers are affected equally. Last, having regulations in place is of no use if they are not effectively enforced; UNODC (2019) reported that South-East Asia, despite a continued crackdown on poachers, remained a hub for illegal wildlife and timber trade.

Concerning SDG 2 (No hunger), Target 2.4 (resilient agricultural practices) is addressed by SPS measures and some other NTMs being applied to agricultural raw materials and related products that may harbour dangerous pests, disease-carrying or disease-causing organisms. Target 2.b (agricultural export subsidies) also specifically mentions the need to eliminate harmful export subsidies and all export NTMs with equivalent effects in order to achieve Goal 2. Like the subsidies on fisheries, however, relevant data have not yet been part of the systematic data collection by UNCTAD and its partners, although subsidies are one of the few examples of NTMs that are explicitly included in the SDG framework (box 1.5).[8]

[8] As of August 2019, SDG indicator values on agricultural subsidies were not available.

Box 1.5

Subsidies as NTMs: trade rules and links to sustainable development

Chapter L of the ICNTM classification is dedicated to subsidies, and chapter P7 is specifically dedicated to export-related subsidies. According to the WTO Agreement on Subsidies and Countervailing Measures, subsidies that are intended to meet export targets or for import substitution are outright prohibited, and are handled under an accelerated timetable in the WTO dispute settlement process (WTO, 2019a). Subsidies for other reasons are permitted, so long as they do not have an adverse impact on interest of trade partners. In cases where a subsidy adversely affects one or more other WTO members, according to the Agreement, the subsidy in question must be withdrawn, or a countervailing duty may be imposed. For example, in August 2019 the European Union imposed countervailing duties of up to 18% on imports of subsidized biodiesel from Indonesia, saying the move aimed to restore a level playing field for European Union producers (European Commission, 2019). Least developed countries and developing countries with less than $1,000 per capita gross national product (GNP) are exempted from disciplines on prohibited export subsidies.

Agriculture-specific subsidies fall under Article 6 of the WTO Agreement on Agriculture. Subsidies that are used to support prices, or subsidies directly related to production quantities are permitted to a limited extent – generally 5% of the product value for developed countries, 10% for developing countries (WTO, 2019b). Article 6 of the Agreement also gives developing countries flexibilities in providing domestic support for the purposes of their development programme, designed to encourage agricultural and rural development. The reduction of agricultural export subsidies is a key staple of WTO Agenda, and the 2030 SDGs under Target 2b (Trade distortion in agricultural markets), Indicator 2.b.1 (Agricultural export subsidies). It is worth to note that the total agricultural subsidies by the WTO members decreased from $4.6 trillion in 1995 to $180 billion in 2014 (United Nations, 2018, as cited by Kravchenko, 2018).

Fisheries subsides can contribute to overfishing and overcapacity, as well as illegal, unreported and unregulated (IUU) fishing. They are explicitly addressed by SDG Target 14.6 which seeks to "…prohibit certain forms of fisheries subsides…". Negotiations on fisheries subsides were launched during the WTO Doha round and are currently ongoing (WTO, 2018). The negotiations have been quite challenging, with the main concern being on balancing public policy concerns, especially for developing countries and LDCs (Bahety and Mukiibi, 2017). At the eleventh Ministerial Conference, WTO members agreed to continue to engage constructively in the negotiations, with a view to adopting an agreement by the Ministerial Conference in 2019 (Kumar and Chakradhar, 2019).

According to data from Global Trade Alert (2018), an independent monitor of policies that affect global trade, among the different categories of discriminatory measures,[a] subsidies were the most frequent, both globally and in Asia and the Pacific (ESCAP, 2018). In 2018, about 30% of the discriminatory measures were subsidies provided to producers, and another 12% were subsidies to exporters.

[a] A discriminatory measure is defined by the Global Trade Alert as an intervention that almost certainly discriminates against foreign commercial interests (Global Trade Alert, 2018).

B. INDIRECT EFFECTS AND NON-TARIFF MEASURES THAT HAVE NO DIRECT LINKS TO THE SUSTAINABLE DEVELOPMENT GOALS

As noted above, the focus of the analysis has been on identifying NTMs with a direct intended (and positive) impact on the achievement of SDG targets (stated or implied). However, it is important to acknowledge that NTMs may be linked to SDGs in various ways.

Apart from the above examples describing very close connection of product-NTM pairs to more than one SDG, there are examples of more subtle linkages. Taking a gender focus, for example, in addressing Target 3.5, NTMs aiming to control and reduce use of alcohol and narcotic drugs (Target 3.5) can also reduce violence against girls and women (SDG Target 5.2), including by intimate partners. Safe cities and inclusive urban environments, which are the objective of SDG 11, can reduce gender-based violence by persons other than intimate partners (Target 5.2) and contribute to women's and girls'

productive involvement in employment and education (Target 5.5). Target 5.6 on universal access to sexual and reproductive health and reproductive rights is partially addressed by SDG 3 (Health and well-being). In the case of NTMs on responsible practices by private and public sectors in supply chains, addressing Targets 12.6 ("Encourage companies … to adopt sustainable practices…") and Target 12.7 ("Promote public procurement practices that are sustainable…"), can contribute to equal employment opportunities and equal pay for work of equal value, regardless of gender.

> *"NTMs sometimes have other important – but not directly related to SDGs – public policy objectives, and some NTMs affect sustainable development indirectly."*

Another case of indirect impact of NTMs that is well-described in literature is the negative impact of NTMs on access to goods and technologies relevant to various SDGs. This may be due to the significant discrepancies in mandatory technical regulations between trading countries. This applies to cases where some such regulations are intentionally excessively strict as well as cases where discrepancies exist due to differences in technological development between countries. Some regulations directly relevant to certain SDGs may indirectly pose barriers to access to goods and technologies relevant to other SDGs. Specifically, intellectual property rights (IPRs) measures are essential for SDG 9 and SDG 16, as they can encourage innovation, contribute to economic development, help combat illicit and counterfeit trade and reduce cash flow generated by it. However, they are also known to pose barriers to the access to medicines and medical technologies, technologies and goods relevant to Targets on renewable energy, energy and water efficiency, climate mitigation and adaptation, information and communications technology (ICT) and sustainable technologies used in various industries.[9] Controls on trade in dual-use technologies, relevant to SDG 16, similarly restrict access to goods relevant to other SDGs, as they target a very wide range of goods that are also essential as production inputs and components of information and communication systems, including those used in early warning systems for natural disasters.

Another issue that is related to non-tariff trade policies, but which is not reflected in the NTM databases, is the procedural obstacles associated with NTM implementation. Poor implementation of legitimate and justified NTMs may limit access of vulnerable populations to essential products or limit the ability of traders, especially small and medium-sized enterprises (SMEs), to enter foreign markets (Target 9.3, Increase access of small-scale enterprises into value chains and markets) (see chapter 2, section C).

It is also important to emphasize the fact that the positive direction of the intended impact of an NTM on an SDG's achievement is inferred from its stated public policy objective or implicit intention. The actual impact of an NTM is usually much broader than the stated objective and the regulated economic sector. Moreover, different contexts of adopting and affected countries (geographical, historical, economic, institutional, regulatory etc.) can heavily influence the impact of an NTM on the ground – and even the direction of impact, particularly if enforcement is weak. One such example, which is given in box 1.1, describes the effects of the anti-IUU fishing legislation imposed by the European Union on imports of seafood from Sri Lanka. Although the implementation of regulatory impact and sustainability impact assessment at the stage of NTM design is a globally accepted best-practice, countries do so rather inconsistently, if at all.

Finally, many NTMs were found to have no direct linkages to SDGs. This is not to say that they lack public policy objectives. For example, while motor vehicle safety can be linked to reducing traffic accident fatalities (Target 3.6), safety of consumer and commercial products cannot be directly linked to any SDG Target. In addition, some measures have an indirect impact on SDGs. Foodborne diseases,

[9] In 2003, WTO members agreed on legal changes that make it easier for poor countries to import cheap generic drugs if they are unable to manufacture the medicines themselves (Novak, 2003). Originally, according to the WTO Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, countries could produce but not export drugs that are excluded from patent restrictions in order to "protect human, animal or plant life or health", thereby restricting those who do not have manufacturing capacity from accessing life-saving medicines.

while claiming nearly 500,000 deaths annually, are not specifically addressed by SDGs, but are arguably the main focus of most technical measures.[10] Finally, some NTMs have a negative impact on SDGs (such as agricultural export subsidies), and hence not having them, contributes to the achievement of SDGs. However, as above discussed, a lack of comprehensive data sources inhibited their inclusion in the analysis.

Although SDGs represent global development priorities, as transpires from the nature of the majority SDG targets and their indicators, SDGs are to be primarily achieved through the implementation of national policies within the borders of the adopting countries. NTMs have a special place in the overall regulatory framework of countries, as by regulating goods that are moving across the borders, NTMs allow governments to address some critical issues within the jurisdictions of other states. Good examples here are measures aimed at preventing imports of conflict minerals (SDG 16), illegal timber and fish (SDG 15 and 14), unsustainably produced products (SDG 12), illegally obtained cultural heritage items (SDG 11), which attempt to affect relevant regulations and production patterns in the exporting countries. Technical measures aiming to address product quality, while potentially directly addressing some aspects of SDGs domestically, also can potentially spillover into addressing SDGs in trade partner economies.

C. CONCLUSION

This chapter linked NTMs to the 2030 Agenda for Sustainable Development. As emphasized, NTMs are not inherently good or bad – they can be important tools in achieving SDGs. At the same time, the proliferation in NTMs globally and within the Asia-Pacific region means that they are now a more significant deterrent to trade than ordinary customs tariffs. The key challenges for policymakers are evaluating whether NTMs are the most effective tools for achieving the public policy objectives and, if so, how to strike the right balance between their positive (intended) effects and cost to traders (and ultimately consumers) associated with them. In many cases, reducing the cost to traders does not mean outright removal of NTMs (which may indeed be a viable option for some), but rather ensuring that NTMs are coordinated across economies and that associated procedural obstacles do not create an unnecessary burden on traders. As such, chapter 2 presents estimates of costs associated with NTMs, the impact of NTMs on trade and investment as well as the issues pertaining to the procedural obstacles that exist because of NTMs.

[10] In this study they are deemed relevant to SDG Target 3.4, which seeks to reduce premature mortality from non-communicable diseases, although the indicators for the Target specify cardiovascular disease, cancer, diabetes, chronic respiratory disease and suicide as the quantifiable incidences of non-communicable diseases.

References

Agence France-Presse (2019). How China's ban on plastic waste imports became an 'earthquake' that threw recycling efforts into turmoil. *South China Morning Post*, 23 April. Available at www.scmp.com/news/china/politics/article/3007280/how-chinas-ban-plastic-waste-imports became-earthquake-threw.

Bahety, S., and J. Mukiibi (2017). *WTO Fisheries Subsidies Negotiations: Main Issues and Interests of Least Developed Countries.* Geneva: CUTS International. Available at https://unctad.org/meetings/en/Contribution/ditc-ted-21032017-OceansForum-CUTS.pdf.

Brooks, A.L., S. Wang, and J.R. Jambeck (2018). "The Chinese import ban and its impact on global plastic waste trade. *Science Advances*, vol. 4, No. 6.

Daniele, U., and H. Regan (2019). Tons of plastic waste dumped in Malaysia will be returned to UK, US and others. CNN, 28 May. Available at https://cnnphilippines.com/world/2019/5/28/US-UK-trash-shipment-in-Malaysia.html?fbclid=IWaR2.

ESCAP (2017). Part II: Channelling trade and investment into sustainable development. In *Asia-Pacific Trade and Investment Report 2017: Channelling Trade and Investment into Sustainable Development.* United Nations publication, Sales No. E.17.II.F.22. Available at www.unescap.org/publications/APTIR2017.

_____ (2018). Policy developments and potential impacts of trade tensions in Asia and the Pacific. In *Asia-Pacific Trade and Investment Report 2018: Recent Trends and Developments* (chapter 4). United Nations publication, Sales No. E.19.II.F.3. Available at www.unescap.org/publications/APTIR2018.

_____ (forthcoming). *Asia-Pacific Countries with Special Needs Development Report: Raising Financing through Ocean Resources to Foster Sustainable Development of Small Island Developing States.* Bangkok.

European Commission (2019). Commission Implementing Regulation (EU) 2019/1344 of 12 August 2019: imposing a provisional countervailing duty on imports of biodiesel originating in Indonesia. Brussels. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1344&from=EN.

Global Trade Alert (2018). *The GTA Handbook.* March. Available at www.globaltradealert.org/data_extraction.

green page (2016). Bangladesh: world leader in banning the plastic bag. Available at http://greenpagebd.net/bangladesh-world-leader-in-banning-the-plastic-bag/#.XVN7DugzZhH.

Jambeck, J.R., and others (2015). Plastic waste inputs from land into the ocean. *Science*, vol. 347, No. 6223, pp. 768-771.

Kravchenko, A. (2018). Where and how to dodge taxes and shift money abroad using trade misinvoicing: a beginner's guide. ESCAP Trade, Investment and Innovation Working Paper Series, No. 1, April. Bangkok: ESCAP. Available at www.unescap.org/publications/where-and-how-dodge-taxes-and-shift-money-abroad-using-trade-misinvoicing-beginner-s-guide.

Kravchenko, A., and others (2019). Exploring linkages between non-tariff measures and the Sustainable Development Goals: a global concordance matrix and application to Asia and the Pacific. ESCAP Trade, Investment and Innovation Working Paper Series, No. 2, September. Bangkok: ESCAP. Available from www.unescap.org/publication-series/tiid-working-papers.

Kumar, R., and J. Chakradhar (2019). An assessment of fishing vessel capacity on subsidies, non-tariff measures, and attaining Sustainable Development Goals. ARTNeT Working Paper Series, No. 184. Bangkok: ESCAP. Available at https://artnet.unescap.org/publications/working-papers/assessment-fishing-vessel-capacity-subsidies-non-tariff-measures-and.

McCarthy, J. (2018). There's now a black market for plastic bags in Kenya. Global Citizen, 16 May. Available at www.globalcitizen.org/en/content/kenya-black-market-for-plastic-bags.

mining.com (2017). The Dodd-Frank repeal: what it means for conflict minerals. 8 August. Available at www.mining.com/web/dodd-frank-repeal-means-conflict-minerals/.

Novak, K. (2003). The WTO's balancing act. *The Journal of Clinical Investigatio*n, vol. 112, No. 9, pp. 1269-1273.

Parker, P.D., J.D. Foltz, and D. Elsea (2016). Unintended consequences of economic sanctions for human rights: conflict minerals and infant mortality in the Democratic Republic of the Congo. WIDER Working Paper 2016/124. Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER). Available at www.wider.unu.edu/sites/default/files/wp2016-124_0.pdf.

Reuters (2017). Kenya brings in world's toughest plastic bag ban: four years jail or $40,000 fine. *The Guardian,* 28 August. Available at www.theguardian.com/environment/2017/aug/28/kenya-brings-in-worlds-toughest-plastic-bag-ban-four-years-jail-or-40000-fine.

Sandaruwan, K., and S.A. Weerasooriya (2019). Non-tariff measures and sustainable development: the case of the European Union import ban on seafood from Sri Lanka. ARTNeT Working Paper Series, No. 189. Bangkok: ESCAP. Available at https://artnet.unescap.org/publications/working-papers/non-tariff-measures-and-sustainable-development-case-european-union.

United Nations (2015). *Sustainable Development Goals.* New York. Available at https://sustainabledevelopment.un.org/sdgs.

UNEP (2018). Our planet is drowning in plastic pollution. Nairobi. Available at www.unenvironment.org/interactive/beat-plastic-pollution/.

_____ (2019). Governments agree landmark decisions to protect people and planet from hazardous chemicals and waste, including plastic waste. Press release, 11 May. Nairobi. Available at www.unenvironment.org/news-and-stories/press-release/governments-agree-landmark-decisions-protect-people-and-planet.

UNODC (2019). *Transnational Organized Crime in Southeast Asia: Evolution, Growth and Impact.* Vienna. Available at www.unodc.org/documents/southeastasiaandpacific/Publications/2019/SEA_TOCTA_2019_web.pdf.

Vigato, A., and A. Kravchenko (2018). Is trade policy being effectively used to curb drinking and smoking? Evidence from ASEAN. ESCAP Trade Insights, No. 21. Bangkok: ESCAP. Available at www.unescap.org/resources/trade-policy-being-effectively-used-curb-drinking-and-smoking-evidence-asean-escap-trade.

Watts, J. (2018). Eight months on, is the world's most drastic plastic bag ban working? *The Guardian*, 25 April. Available at www.theguardian.com/world/2018/apr/25/nairobi-clean-up-highs-lows-kenyas-plastic-bag-ban.

WEF (2016). *The New Plastics Economy: Rethinking the Future of Plastic.* Geneva. Available at http://www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.

WTO (2018). Introduction to fisheries subsidies in the WTO. Geneva. Available at www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_intro_e.htm.

_____ (2019a). Understanding the WTO: the Agreements – subsidies and countervailing measures. Geneva. Available at www.wto.org/english/thewto_e/whatis_e/tif_e/agrm8_e.htm#subsidies.

_____ (2019b). Domestic support in agriculture: the boxes. Geneva. Available at www.wto.org/english/tratop_e/agric_e/agboxes_e.htm.

ONLINE DATABASE

UNCTAD. Trade Analysis Information System (TRAINS) database. Available at https://trains.unctad.org/.