# 3 Applicable legal framework

# 3. Applicable legal framework

**The international legal framework relevant for climate change related NTMs includes both international climate change instruments and international trade law instruments**. Policy makers and regulators must take these two bodies of law into account, and understand their linkages when designing technical regulations, conformity assessments and mandatory labelling schemes.

## 3.1. Climate change law

**Climate change instruments —and, in particular, the UNFCCC and the Paris Agreement— do not indicate what measures States should adopt in the context of their climate change mitigation and adaptation strategies.** The Paris Agreement (in Article 6 paragraphs 8 and 9) recognizes that Parties will use non-market approaches (NMAs) in the implementation of their NDCs and defines a framework for NMAs. A UNFCCC technical paper from 2014 provides examples of NMAs, which include fiscal instruments (such as taxes or financial subsidies), education and awareness raising as well as technical regulations (UNFCCC, 2014). In the end, however, it is up to each State to decide what specific measures to adopt to achieve their objectives and targets. It follows that, whenever a State adopts a technical regulation, a labelling requirement or a conformity assessment procedure, the choice of such a measure is not mandated by any climate change instrument. The Paris Agreement specifies the overall objectives to be pursued but it is up to each State individually to set its own emissions reduction targets and to select the measures to be adopted at the national level to achieve them. This is an important clarification to keep in mind in case any 'conflict' arises with the rules established by trade agreements.

**Therefore, potential legal 'conflicts' on climate change related NTMs do not occur between international trade and international climate change norms, but rather between international trade norms and *domestic* policies or measures.** Trade agreements regulate a wide variety of trade measures, regardless of any legitimate objective they may pursue (*i.e.*, climate change mitigation). Climate change instruments do not require the adoption of specific measures. The few references that climate change instruments make to domestic climate change mitigation or adaptation measures go in the same direction as trade norms in that they clarify the need to ensure that whatever climate measure a State decides to adopt, it shall not "constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade."[12] As discussed in the fourth Section of this report, climate change law also sets out a series of guiding principles to ensure equity in climate change-related NTMs and mitigate potential adverse trade and development impacts on developing countries.

**In addition to climate change law, broader international environmental law emphasizes the mutual supportiveness between the two corresponding regimes, the preference for multilateral (rather than unilateral) trade-related environmental measures and the importance of basing environmental measures on international consensus.** These key principles of international environmental law can be found in the text of the 1992 Rio Declaration on Environment and Development, in particular Principle 12. Finally, it reiterates the clarification that "trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade."

**This means that, to be effective in pursuing climate change mitigation objectives, technical regulations will have to be designed and implemented in a way that is non-discriminatory and not excessively trade restrictive.**

## 3.2. International trade law

**Avoiding arbitrary or unjustifiable discrimination and disguised restrictions on international trade represents one of the main objectives of multilateral trade law.** In this regard, WTO agreements and jurisprudence provide a detailed framework for the adoption and implementation of climate change-related TBTs.

### 3.2.1. Applicable rules – GATT and the Technical Barriers to Trade Agreement

**The key WTO agreements governing climate change-related NTMs are the GATT and the TBT Agreements. As far as the GATT is concerned, Articles I (Most-favoured nation or MFN) and III (National Treatment) are especially relevant.** Together, they require WTO Members not to discriminate against foreign products in favour of 'like' products from a third State or 'like' domestic products. In particular, according to Article III:4:

> *The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution, or use […].*

**Article XI of the GATT prohibits quantitative restrictions with certain exceptions.** Paragraph 2(b) introduces an exception to the general rule contained in Article XI, paragraph 1, and allows import and export prohibitions or restrictions "necessary to the application of standards or regulations for the classification, grading or marketing of commodities in international trade".

**Finally, Article XX of the GATT contains a list of general exceptions for public policy objectives.** This allows WTO Members to derogate from a GATT rule provided that this is not done in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.

**Three justifications listed under GATT Article XX are particularly relevant for climate change-related NTMs: Protection of human, animal or plant life or health, compliance with laws or regulations which are not inconsistent with the provisions of the GATT, and conservation of exhaustible natural resources.** Article XX has been relied upon in several disputes to justify measures adopted for environmental or public health reasons. In the *Brazil – Tyres* case, Article XX was applied for the first time by the WTO's Appellate Body in relation to climate change (see subsection 3.2.3).

**For technical regulations, the TBT Agreement generally takes precedence over the GATT.** The TBT Agreement addresses a subset of the measures covered by GATT Article III (National Treatment), namely those identified in Article III:4 (see subsection 3.2.1). It follows that the same measure (*i.e.*, a technical regulation) could potentially fall under the purview of both the GATT and the TBT Agreement. The two agreements, however, differ in their application, as they do not include the same test for legal consistency and for non-discrimination. Between the two agreements, the TBT Agreement takes precedence, based on the General Interpretative Note to Annex 1A (which addresses the relationship between the two agreements), and WTO jurisprudence on the matter (WTO, 2001 and WTO, 2002). It follows that the GATT will only apply residually whenever a technical regulation does not fall under the scope of the TBT Agreement.

### 3.2.2. Purpose and scope of the Technical Barriers to Trade Agreement

**The TBT Agreement aims to ensure that technical regulations, standards and conformity assessment procedures are non-discriminatory and do not create unnecessary obstacles to trade.** However, the agreement also recognizes Members' rights to adopt the regulations and standards they consider appropriate, for example for the protection of the environment and climate change mitigation.

**The TBT Agreement covers three sets of activities:**

1. **the preparation, adoption, and application of technical regulations by governments.** Technical regulations, as defined in Annex 1 of the TBT Agreement are documents laying down product characteristics or the related process and production methods with which compliance is mandatory. According to the Appellate Body in *EC – Asbestos*, such 'characteristics' "might relate, *inter alia*, to a product's composition, size, shape, colour, texture, hardness, tensile strength, flammability, conductivity, density, or viscosity" (WTO, 2001). TBT Annex I also specifies that technical regulations may also include or deal with terminology, symbols, packaging or labelling requirements. As explained by the Appellate Body in *EC – Asbestos*, "These examples indicate that "product characteristics" include, not only features and qualities intrinsic to the product itself, but also related "characteristics," such as "the means of identification, the presentation, and the appearance of a product (WTO, 2001)." Product characteristics can thus be expressed either in positive (what traded goods must contain) or negative terms (what traded goods must not contain). (WTO, 2001)
2. **the preparation, adoption and application of standards by standardizing bodies.** These are defined in Annex 1 of the TBT Agreement as "documents approved by a recognized body, that provide for common and repeated rules, guidelines or characteristics for products or related processes and production methods with which compliance is not mandatory."
3. **the conformity assessment procedures** used to determine whether the relevant requirements in technical regulations or standards are fulfilled.

All the measures mentioned in Section 2 of this report fall under one of these three broad categories, and particularly category 1) and 3).[13]

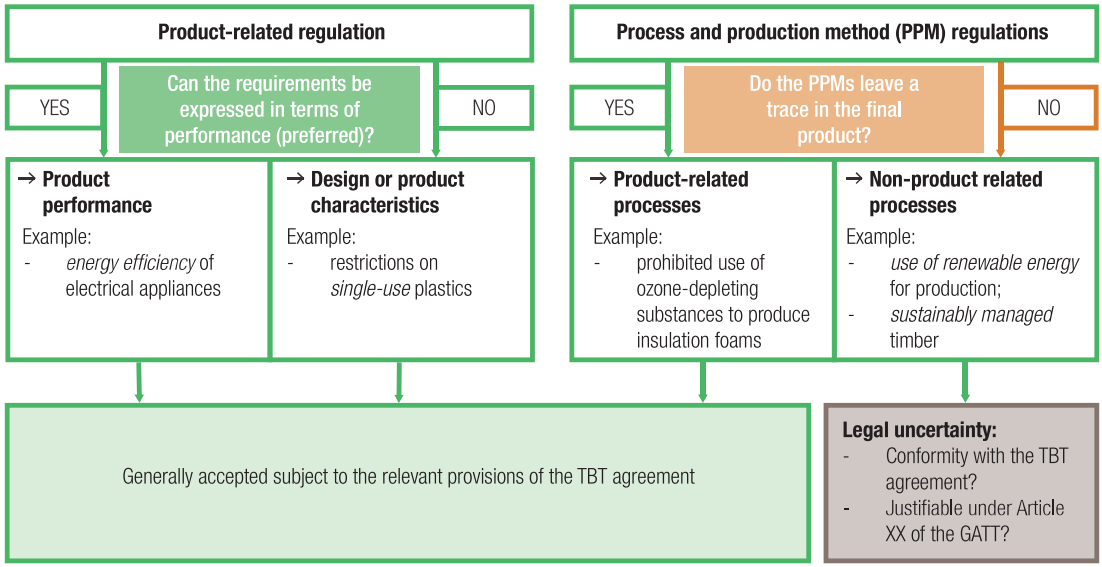
### 3.2.3. Process and production method under the Technical Barriers to Trade Agreement: A key question for the design of climate change-related technical regulations

**PPMs address the way in which a product is produced, *i.e.*, by introducing energy-efficient requirements, GHG emission limits or mandatory renewable energy input levels, and they can contribute significantly to emissions reduction.** These PPMs are particularly relevant for the definition of climate change-related technical regulations. The TBT Agreement takes into account the importance of PPMs – unlike other agreements like the GATT that do not mention them – by explicitly referring to PPMs in Annex 1. Technical regulations, for instance, are described as a "document which lays down product characteristics or their related processes and production method." This definition, however, only refers to the process and production method that is "related" to a product, and this may raise some questions from a climate change perspective.

**PPMs can be of two types: product-related (when the PPM leaves a trace, an effect or is detectable in the final product) and non-product-related (when the PPM does not leave any trace and is not detectable in the final product).** The use of the word "related" in the definition of technical regulations seems to suggest that only technical regulations based on product-related PPMs fall under the scope of the TBT Agreement. The conclusion may be different for labelling requirements, as the definition, when it refers to labelling requirements, omits the word "related": "labelling requirements as they apply to a product, process or production method." The Appellate Body in *US – Tuna II*, while not discussing the role of PPMs, found that the measure in question (a United States labelling scheme based on the method of fishing tuna) fell under the scope of the TBT Agreement (WTO, 2012c).

**Clarifying whether non-product-related PPMs fall under the scope of the TBT Agreement is extremely relevant for climate change mitigation, considering that, from a climate change perspective, the way in which a product is produced (*i.e.,* its carbon footprint) despite being an essential component of the product itself, often leaves no detectable traces in the final product.** It should be noted that, if a measure based on non-product-related PPMs is found not to fall under the scope of the TBT Agreement, it will then be examined under Article III of the GATT and might be justifiable under GATT Article XX. Removing a technical regulation from the scope of application of the TBT Agreement, however, automatically removes the application of the TBT transparency provisions (*i.e.*, the obligation to notify the technical regulation). The result can be detrimental for those countries, especially developing countries, whose exports face those technical regulations (Marceau, 2016). Figure 1 summarizes the different types of technical regulations and their implications under international trade law.

Figure 1.
**Types of technical regulations and their WTO compliance**




## 3.2.4. Ensuring the WTO compliance of technical regulations

**Technical regulations can have a significant impact on trade and competitiveness and may hide protectionist intents.** At the same time, they may meet legitimate regulatory objectives including overcoming negative externalities, such as is the case for many climate change-related technical regulations. All these factors are taken into account by Article 2 of the TBT Agreement, which governs the preparation, adoption and application of technical regulations.

**Even technical regulations that fulfil a legitimate objective must meet certain conditions of implementation.** They shall (i) not be discriminatory (Article 2.1); (ii) not be more trade-restrictive than necessary to fulfil their objective, so as not to create unnecessary obstacles to international trade (Article 2.2); and (iii) be based on international standards, except when such international standards or some of their relevant provisions would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued (Article 2.4). The following subsections will address each of these elements.

## 3.2.5. Legitimate objectives

**Article 2.2 of the TBT Agreement lists a number of possible legitimate objectives: "Such legitimate objectives are, *inter alia*: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment."** The case law shows a deferential attitude toward the WTO Member adopting the technical regulation

when it comes to reviewing the legitimacy of the objective being pursued. As noted by the Appellate Body in *US – Tuna II (Mexico)*, the use of the words 'inter alia' in Article 2.2 suggests that the provision does not set out a closed list of legitimate objectives, but rather lists several examples of legitimate objectives.

**On the basis of the formulation of TBT Article 2.2 and the relevant case law, there is hardly any doubt that a technical regulation adopted for climate change mitigation purposes would be considered as pursuing a legitimate objective.** This is also true on the basis of other WTO Agreements. The GATT, for instance, in Article XX, allows measures that are "necessary to protect human, animal or plant life or health" (letter b), or "relating to the conservation of exhaustible natural resources" (letter g).[14] Applying GATT Article XX(b), the Appellate Body in *Brazil – Tyres* explicitly referred to measures adopted to tackle climate change and global warming (WTO, 2007[15]). In its report, the Appellate Body concluded that even if the contribution of a measure to public health or environmental objectives is not immediately observable, it can still be justified under Article XX(b) on the basis of a demonstration that it is "apt to produce a material contribution to the achievement of its objective," considering in particular that "certain complex public health or environmental problems [such as climate change] may be tackled only with a comprehensive policy comprising a multiplicity of inter acting measures [and] the results obtained from certain actions ... can only be evaluated with the benefit of time" (WTO, 2007). Similarly, the plurilateral Government Procurement Agreement (GPA), revised in 2012, allows procuring entities to prepare, adopt, and apply technical specifications "to promote the conservation of natural resources or protect the environment" (Article X.6). Finally, the preamble of the Agreement establishing the WTO mentions sustainable development among the WTO's objectives and has been relied upon by the Appellate Body in interpreting other WTO Agreements' norms (WTO, 1998b).

### 3.2.6. Non-discrimination

**The non-discrimination requirement can be found in Article 2.1 of the TBT Agreement:**

> **Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country.**

**The Appellate Body in *US – Clove Cigarettes* and *US – Tuna II (Mexico)* set out a three-pronged legal test for this provision.** Article 2.1 of the TBT Agreement consists of three elements that must be demonstrated in order to establish an inconsistency with this provision, namely:

- that the measure at issue **constitutes a 'technical regulation'** within the meaning of Annex 1.1;
- that the imported products **must be like the domestic product** and the products of other origins; and
- that the treatment accorded to imported products **must be less favourable** than that accorded to like domestic products and like products from other countries (WTO, 2018a and 2012b).

**A technical requirement (first requirement, see subsection 3.2.2) can only be discriminatory if products are 'like' (second requirement).** In fact, if a technical regulation favours a domestic product over a different imported product, there is no discrimination. For there to be discrimination, the two products need to be *"like". A*ccording to the Appellate Body, *"like" products are a subset of directly competitive or substitutable products: all like products are, by definition, directly competitive or substitutable products, whereas not all "directly competitive or substitutable" products are "like"* (WTO, 1999).

**A key question in the context of climate change-related technical regulations is whether goods produced with a different emission intensity, energy intensity or type of energy source may be considered 'unlike' pursuant to Article 2.1. of the TBT Agreement.** If this were the case, a country may be allowed to favour a domestic product produced with renewable energy or with a less $CO_2$-emitting

process over an imported product produced with conventional energy or with a higher-emitting process. The two products, in all other respects, may be identical but the regulatory objective would allow to differentiate between them.

**The case law shows a preference for a competition-oriented approach to the 'like products' analysis under Article 2.1 of the TBT Agreement rather than one based on the regulatory objectives of a technical regulation** (WTO, 2012a). This would mean that what matters is whether two products compete in the same market. If it is shown, for instance, that a product produced with renewable energy and one produced with conventional energy compete in the same market, they will probably be found to be "like" (regardless of the clear contribution that the first product makes towards climate change mitigation) and any different treatment may therefore be considered a violation of TBT Article 2.1. Interestingly, however, the Appellate Body in *US – Clove Cigarettes* acknowledged the relevance of regulatory concerns (in that case these concerns related to the protection of public health), *"to the extent they have an impact on the competitive relationship between and among the products concerned.* (WTO, 2012a)". This would mean that proving that demand is affected by the regulatory objective underlying a differential treatment (*i.e.*, climate change mitigation) is a factor that should be taken into account in future decisions when determining the likeness of two products.

**The third requirement is that of treatment no less favourable than that accorded to like domestic products and like products from other countries**. Considering that the object and purpose of the TBT Agreement is to strike a balance between trade liberalization and Members' right to regulate, the Appellate Body has clarified that Article 2.1 should be interpreted as permitting "detrimental impact on competitive opportunities for imports that stems exclusively from legitimate regulatory distinctions" (WTO, 2012a). The burden of proof falls on the complainant to demonstrate less favourable treatment, which the respondent may rebut by showing that the detrimental impact on competitive opportunities for imports stems exclusively from legitimate regulatory distinctions (*i.e.,* a regulatory distinction aimed at climate change mitigation as in the example above). (WTO, 2018a)

### 3.2.7. The measures shall not be more trade restrictive than necessary to fulfil their objective

**Article 2.2 of the TBT Agreement reads (in the relevant part):**

**Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create.**

The Appellate Body in *US – Tuna II (Mexico)* summarized the steps involved in the analysis under Article 2.2 of the TBT Agreement (WTO, 2018a).

- The first factor to be considered is the **degree of contribution to the legitimate objective**, which requires considering the design, structure and intended operation of the measure, as well as its actual impact (WTO, 2018b).
- The second factor is the **trade-restrictiveness of the measure**, which will depend on the circumstances of each case (WTO, 2018b) and will require a comparison with alternative measures. It is not necessary for the alternative measure to achieve a degree of contribution identical to that of the challenged measure but merely equivalent. The burden of proof falls on the complainant to demonstrate that the measure at stake is more trade restrictive than necessary to achieve the contribution it makes to the legitimate objective and to present a possible alternative. It is then for the respondent to rebut the

complainant's prima facie case by demonstrating, for example, that "the alternative measure identified by the complainant is not, in fact, 'reasonably available' [*i.e.*, because it entails undue burdens or prohibitive costs], is not less trade restrictive, or does not make an equivalent contribution to the achievement of the relevant legitimate objective (WTO, 2012b)." As a result, were a country to decide to adopt a climate change related technical regulation, it would be advisable to ensure that other less trade-restrictive alternatives that would allow to achieve an equivalent result (in terms of climate change mitigation) are considered but excluded because they are too costly, burdensome, not technically feasible or simply not available.

- The third factor is the consideration of the **risk that non-fulfilment would create**, which may lead to the exclusion of an alternative that involves a greater risk of non-fulfilment of the objective pursued by the technical regulation at stake (WTO, 2011).

### 3.2.8. The importance of international standards

**The importance of basing technical regulations on international standards is evident from Articles 2.4 and 2.5 of the TBT Agreement.** According to Article 2.4:

> **Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems.**

**Article 2.4 requires WTO Members to base their technical regulations on the relevant international standards, if they exist, and unless they would be ineffective or inappropriate to fulfil the legitimate objective pursued.** It follows that States are not obliged to implement international standards: they must observe them only if they decide to adopt a technical regulation in an area covered by an international standard. In addition, the regulating State can decide to deviate from a relevant international standard if it proves to be 'ineffective' or 'inappropriate'. In case of conflict regarding the deviation from an international standard, the burden of proof stays with the complainant to demonstrate that the international standard is appropriate and effective (WTO, 1998a).

**Technical regulations that conform with international standards are presumed to be necessary, according to Article 2.5 of the TBT Agreement**. This means that they are presumed to represent the least trade-restrictive option available to achieve a stated objective.

**It follows that climate change related technical regulations and conformity assessment procedures that are based on an international standard and are non-discriminatory will be judged to be TBT-consistent.** The TBT Agreement indicates that international standards are those prepared by the "international standardization community" (see box 1 for an overview of international standards). ISO standards in areas such as motor vehicles, transportation fuel, biofuels, building or domestic appliances (box 1) have often been used as a basis for technical regulations at the national level. To provide an example, the European Union Energy Performance Buildings Directive (2018) refers to ISO 52000-1, 52000-3, 52010-1, 52016-1, and 52018-1.

**Part 4 of this report will review the potential of international standards to be more environmentally effective, more cost-efficient and more equitable towards developing countries**. This is especially true for countries with limited capacity to develop national climate change related standards or to meet requirements from multiple diverging standards affecting the same product. As Section 4 will emphasize, however, several factors need to be taken into account to ensure the effectiveness, efficiency and equitability of international standards.

# 4 Effectiveness and equity of climate change-related technical regulations

# 4. Effectiveness and equity of climate change related technical regulations

**The legal frameworks applicable to climate change related technical regulations do not contain any concrete indication as to the effectiveness, feasibility, and equity of these measures**. This Section of the report will address these questions by briefly assessing (i) the effectiveness and efficiency of climate change-related technical regulations; (ii) the political feasibility of climate change-related technical regulations *vis-à-vis* other measures (*i.e.*, border tariffs); and (iii) the equity and fairness of climate change-related technical regulations, in particular concerning developing countries.

## 4.1. Effectiveness and efficiency

**Technical regulations need to be effective: the actual impact of the requirement must be measured against its stated purpose (*e.g.*, the reduction of the carbon footprint of a product and/or of its production process).** The climate change effectiveness of a measure is not easy to determine, considering that other factors could also contribute to the achievement of a given goal or target. Nevertheless, a number of studies have emphasized the potential of climate change-related technical regulations for increasing the energy efficiency of products or reducing their carbon footprint (Geller, 2006). For instance, energy efficiency standards and regulations on appliances in the European Union and Japan have been linked to a 1 per cent average annual efficiency increase (Fekete *et al.,* 2021). Similarly, studies have confirmed the potential of labelling requirements to generate behavioural changes on consumers and manufacturers (WTO/UNEP, 2009).

**Climate change-related technical regulations need to be efficient: Measures must also be assessed against the level of adverse trade impacts**. In this regard, the application of WTO rules should ensure that no *unnecessary* trade distortions are created (see Section 3). Climate change law also provides a set of guiding principles to limit the adverse trade and development impacts of response measures on developing countries. These principles will be further detailed in subsection 4.3. However, trade distortions may still occur.

**The effectiveness and efficiency of regulations must also be compared to price mechanisms, *i.e.*, carbon pricing.** Generally, price mechanisms are considered more efficient since it is left to the market to find the cheapest way to achieve a specified emission reduction goal. For example, a maximum for energy consumption of electrical appliances in stand-by modus as in the European Union may be more costly per reduced emissions than more stringent car efficiency requirements or a change in mobility behaviour. Furthermore, governments may raise income from carbon pricing. However, the reality has shown that pricing reflecting all external effects is difficult (see subsection 4.2) and that the introduction of regulations can trigger innovations to enhance energy efficiency.

**The challenge of carbon leakage – the relocation of production operations to countries with laxer emissions constraints for cost reasons related to climate policies – exists with regulations as well as with carbon pricing**. Evidence comparing the two alternatives, regulations, and price-based mechanisms, is scarce and beyond the scope of this study.

**The environmental effectiveness and efficiency of technical regulations and their "trade efficiency" will also depend on the convergence of standards**. Currently, technical regulations in different countries often rely on different standards, signalling a lack of harmonization and acting as a barrier to trade by raising information and compliance costs (Vanzetti, Peters and Knebel, 2016). Conversely, aligning these divergent standards (*e.g.*, divergent carbon emissions calculation methodologies) can contribute to increasing the environmental effectiveness of climate change-related TBT measures (*e.g.,* by

enabling harmonization and ensuring that more effective methods are employed) (WTO, 2022), and help reduce costs for businesses.

**The text of the TBT Agreement underscores the importance of harmonization and provides several pathways to promote it**:

1. Encouraging mutual recognition of technical regulations and conformity assessment (Article 2.7); Urging WTO Members to base their technical regulations and conformity assessment procedures on international standards (Preamble, Article 2.4); Presuming the necessity of technical regulations that are based on international standards (Article 2.5); and Special rules apply to developing countries. (See later para. 85)
2. **The way in which international standards are set will directly impact their acceptance by countries, thus influencing the effectiveness and equity of the measures adopted on their basis** (see subsection 4.3). The TBT Committee has developed some guidelines on how to develop international standards: the *Six Principles for the Development of International Standards, Guides and Recommendations*, which are intended to help international standards better facilitate global trade and to provide guidance in the areas of:
    - **Transparency.** All essential information regarding work programs, proposals for standards, guides and recommendations under consideration, as well as the final results should be made easily accessible to at least all interested parties in the territories of at least all WTO Members. Procedures should be established so that adequate time and opportunities are provided for written comments.
    - **Openness.** Membership of an international standardizing body should be open on a non-discriminatory basis to the relevant bodies of at least all WTO Members. In addition, any interested member of the international standardizing body, *including especially developing country Members*, with an interest in a specific standardization activity should be provided with meaningful opportunities to participate at all stages of standard development. (See also later para. 84)
    - **Impartiality and consensus.** All relevant bodies of WTO Members should be provided with meaningful opportunities to contribute to the elaboration of an international standard so that the standard development process will not give privilege to, or favour the interests of, a particular supplier/s, country/ies or region/s. Consensus procedures should be established to take into account the views of all parties concerned and to reconcile any conflicting arguments.
    - **Effectiveness and relevance.** International standards need to be relevant and to effectively respond to regulatory and market needs, as well as scientific and technological developments in various countries. They should not distort the global market, have adverse effects on fair competition or stifle innovation and technological development. Whenever possible, international standards should be performance based rather than based on design or descriptive characteristics.
    - **Coherence.** The principle of coherence exhorts international standardizing bodies to avoid duplication of, or overlap with, the work of other international standardizing bodies. In this respect, cooperation and coordination with other relevant international bodies is essential.
    - **Development dimension.** The development dimension requires taking into consideration the constraints on developing countries to effectively participate in standards development. Tangible ways of facilitating developing countries' participation in international standards development should be sought. Provisions for capacity building and technical assistance within international standardizing bodies are important in this context.[16]

**The Six Principles have been adopted by standardizing bodies such as the International Code Council (ICC), which develops international codes for the building sector to ensure GHG emissions reduction and enhanced resilience** (International Code Council 2021). However, it is hard to precisely ascertain the adherence of standardizing bodies to the Six Principles for the Development of International Standards, Guides and Recommendations, as well as the way in which they are implemented in the context of climate change-related standards. This is because the TBT Committee does not have a process in place at the moment to monitor such adherence (WTO/OECD, 2019).

## 4.2. Political and institutional feasibility

**Regulatory instruments are generally seen as facing less political constraints when compared with other measures such as carbon taxes.** This consideration of political feasibility, in addition to effectiveness and efficiency, represents another important criterion for evaluating climate change mitigation measures. By contrast, carbon taxes often face strong political opposition and are overall not politically popular (Gupta *et al.*, 2007). As policymakers tend to support policies that minimize the economic impact on businesses and households, and that secure durable political support, they often prefer narrowly-targeted regulations over taxes (Jenkins and Karplus, 2017).[17]

**Developing countries, in particular, may often lack the institutional infrastructure required to collect and monitor climate-related taxes.** Moreover, market-based instruments such as carbon taxes often require fully developed market economies in order to be effective (Gupta *et al.*, 2002),[18] and remain surrounded by significant uncertainty as to their WTO-consistency.

## 4.3. Equity and fairness: The perspective of developing countries

**Due to potentially increased costs and capacity challenges, climate change-related technical regulations could hinder developing countries competitiveness and their ability to access developed country markets** (IISD, 2021[19]) In particular, concerns have been raised about the growing complexity and diversity of environmental labelling schemes, which are sometimes based on life-cycle analysis and on specific designs or characteristics. This creates difficulties for developing countries which often lack carbon efficient technologies, making it more difficult for their companies to be certified for labels in developed countries (Appleton, 2009). Moreover, conformity assessment procedures can be lengthy and costly for many developing countries which, without being able to provide certification and inspection services, will be excluded from export markets (Brenton and Chemutai, 2021).

**The special needs of developing countries are taken into account by both international trade and climate law.** The following paragraphs will address these considerations in greater depth.

**The UNFCCC recognizes that measures taken by developed countries to mitigate climate change could negatively impact developing economies and impede sustainable development efforts and provides general guidance to mitigate these impacts.** These provisions mostly provide obligations for developed countries when they decide to adopt climate change mitigation measures.

On the basis of a number of decisions,[20] the following guiding principles can be emphasized:

1. *Economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties* and responses to climate change should be coordinated with social and economic development (UNFCCC Article 4.7; Decision 5/CP.7). For this reason, *developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties* (UNFCCC Article 4.5).

2. One of the core principles of the UNFCCC recommends that the *specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention* be given full consideration (UNFCCC Article 3.2). Resulting from this principle, *developed countries shall take into account the specific needs of less developed countries when designing and implementing response measures* (UNFCCC Articles 4.9 and 4.10; Decision 5/CP.7; Paris Agreement Article 4.15). *Developed countries shall consider and minimize the adverse impacts of their response measures on developing countries* (UNFCCC Article 4.8 and Kyoto Protocol Articles 2.3 and 3.14. Para. 89 of the Cancun Agreements urges developed countries to *avoid* such negative impacts, both social and economic). *Developed countries shall make sure that response measures do not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade* and, more generally, minimize their adverse effects on international trade (UNFCCC Article 3.5; Kyoto Protocol, Article 2.3; Bali Action Plan, at 10, Decision 19/CP.26)[21]

    - These issues are still currently being discussed in different fora, such as the Forum on the impacts of the implementation of response measures under the Convention, Kyoto Protocol and the Paris Agreement, the Katowice Committee of Experts on Impacts of Implementation of Response Measures, and the Forum on Response Measures.
    - The main challenges expressed by developing countries have been a lack of experience with the assessment of the impacts of trade-related response measures, a lack of case studies and a lack of methodological and analytical tools.
    - To address these challenges, the Forum on the impacts of the implementation of response measures has been providing a platform to share information and best practices in order to facilitate and improve the assessment of the impacts of response measures in developing countries and enhance their capacity by providing concrete examples and case studies. To this end, the Forum has emphasized the importance of training and capacity building efforts to enhance developing countries' ability to carry out their own assessments and analyses of the implementation of response measures, as well as the essential role of technology development and transfer to maximize the positive and minimize the negative impacts of response measures (UNFCCC, 2021b).

3. *If negative impacts are produced, developed countries should assist developing ones in addressing them by providing support, including financial resources, transfer of technology and capacity-building*. (Decision 5/CP.7, paras 23 and 27; Cancun Agreements, para. 89). *Developing countries should provide information on their specific needs and concerns arising from the impact of the implementation of response measures* (Decision 5/CP.7, para. 20).

**On the international trade law side, *Special and Differential Treatment (SDT)* in favour of developing countries is embedded across the various agreements of the WTO.** These provisions are meant to create additional equity and fairness accounting for the challenges faced by developing countries. Across all WTO agreements, there are 155 SDT provisions covering the following categories: Provisions aimed at increasing the trade opportunities of developing country Members; Provisions that require WTO Members to safeguard the interests of developing country Members; Flexibility of commitments, of action, and use of policy instruments; Transitional time-periods; Technical assistance; and Provisions relating to least developed country Members.

**The most pertinent SDT provisions in the context of climate-change related measures are found in the TBT agreement.** The preamble sets the tone by declaring that "developing countries may encounter special difficulties" and that WTO Members desire "to assist them in their endeavours in this regard" (Preamble 9th recital).

**Article 12 requires WTO Members, in the preparation and application of technical regulations, standards and conformity assessment procedures, to take account of the special development, financial and trade needs of developing country Members**, with a view to ensuring that such technical regulations, standards and conformity assessment procedures do not create unnecessary obstacles for exports from developing country Members (Article 12.3).

**Article 11 outlines the technical assistance that Members should provide to developing countries.** The provisions cover support on the preparation of technical regulations (Article 11.1), on the establishment of national standardizing bodies, on the participation in international standardizing bodies (Article 11.2), on compliance and conformity assessment with regard to Members' import requirements and standards (Articles 11.3, 11.4, 11.5, 11.6). All of the above technical assistance shall be prioritized for least developed countries (Article 11.8). Developing countries that take advantage of these commitments and build the necessary capacities are more likely to be able to comply with the increasing number and complexity of climate change related TBT applied by developed countries.

**Furthermore, when introducing or changing conformity assessment procedures, WTO Members are held to give enough time, particularly for developing countries, between publication and entry into force** (Article 5.9). This reduces the potential negative impact on developing countries when developed countries introduce climate change related measures.

**The actual implementation and support given to developing countries to avert negative trade and development impacts of climate change-related TBTs will determine the level of fairness and equitability of such measures.** Enhancing developing countries' capacity to adopt and comply with climate change-related technical regulations will play a key role in the global uptake of carbon efficient products and technologies.

**In this context, the regular work of the WTO TBT Committee is critical, including on Specific Trade Concerns (STCs), triennial reviews and exchanges of best practices.** If developing countries are negatively affected by complex climate change related requirements or conformity assessment procedures, they can raise STCs at the WTO Committee. The imposing Member may adjust the requirement or provide technical assistance to mitigate the impact of the measure. Consultation on STCs in the TBT Committee are a powerful tool to establish further equity between developing and developed countries. The triennial reviews allow WTO Members to discuss.

**Furthermore, Trade and Environmental Sustainability Structured Discussions (TESSD) are ongoing at the WTO.** The TESSD offer a platform to specifically discuss climate change related NTMs and exchange experiences and best practices, for example on carbon accounting standards by ISO. However, so far, only 74 WTO Members are participating and developing countries are underrepresented.

**Another important consideration is the disproportionate impact on women and small and medium size enterprises (SMEs).** This has been studied and should be taken into account when designing and implementing technical regulations. Studies show that NTMs often disproportionately negatively affect women (as consumers, producers, and traders (UNCTAD, 2022) as well as SMEs).