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**Working Party on Regulatory Cooperation
and Standardization Policies (WP.6)**

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Training Material on Standards in Support of the Sustainable Development Goals

Submitted by the secretariat

Summary

This training material was prepared in the framework of the project "Enhancing usage and uptake of standards for sustainable development, gender equality and the empowerment of women and girls". It aims to support standards development bodies to identify and map standards to the goals of the UN 2030 Agenda. It can also be used by Government agencies, academia or private-sector experts in order to understand the linkages between standards and the Sustainable Development Goals.

Document (ECE/CTCS/WP.6/2022/INF.3) is submitted by the secretariat to the thirty-second Annual Session for information.

1.   Standards can contribute to the achievement of Agenda 2030 for Sustainable Development. Many standards development organizations (SDOs) have provided mappings of their standards to the Sustainable Development Goals (SDGs). The Working Party on Regulatory Cooperation and Standardization Policies (WP.6), in close collaboration with many international SDOs, has provided a platform to visualize these mappings and assist Government agencies, academia and private-sector actors to identify standards which could help achieve specific SDGs.[1]

2.   This training material is split into five chapters:

- A brief review of the 2030 Agenda

- A brief review of standards, what they are and how they are developed

- An explanation of how standards contribute to harmonization and cooperation

- A demonstration of how standards can help to achieve an SDG

- A practical explanation of how to map standards to SDGs

3.   This material comes in support of the Standards for SDGs platform.[1] It can help technical committees to understand the logic behind mapping standards to the SDGs and provide practical elements on how to do this. It can also help Governments, academia and private-sector actors to understand the role of standards and how they can contribute to achieving Agenda 2030.

4.   The ECE hopes that this training material will support the use of standards to achieve Agenda 2030, encourage member States to consider using standards in this goal and assist SDOs to effectively map standards for maximum benefit of users.

5.   The training material is presented annexed to this annual session document in the format which it is intended to be used.

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[1] See: https://standards4sdgs.unece.org/

Training Manual on Standards for SDGs

Table of Contents

Introduction

This training manual provides a reference source on the topic of standardization and the United Nation's 2030 Agenda for Sustainable Development. It provides details on defining what a standard is, the types of standards, how standards are developed, and finally how to engage in the standardization process. It also provides introductory material for parties interested in the adoption and implementation of standards, their inherent use and associated impact.

The objectives and benefits of UN 2030 Agenda will be discussed, the role of standardization and how standards development organizations (SDO) and national standards bodies (NSB) working at regional and international levels can help achieve sustainable development. The difference between regulation and standardization will be discussed as well as the benefits of standardization for innovation, economies and the environment through standardization, harmonization, and cooperation. This manual will outline how standards can help in the achievement of the UN 2030 Agenda for Sustainable Development by directly and indirectly supporting many of the Sustainable Development Goals (SDG).

Chapter 1: The 2030 Agenda for Sustainable Development

The UN 2030 Agenda is a plan of action for people, planet and prosperity. It seeks to strengthen universal peace in larger freedom. It recognizes that eradicating poverty in all its forms and dimensions, including extreme poverty, is one of the greatest global challenges and an indispensable requirement for sustainable development. It is hoped that all countries and all stakeholders, acting in collaborative partnership, will implement this plan. The main objective is: to leave no one behind.[2]

The UN 2030 Agenda for Sustainable Development was adopted by all United Nations Member States in 2015. It provides a blueprint for peace and prosperity for people and planet, now and into the future. There are 17 focus areas necessary to achieve sustainable development, called Sustainable Development Goals (SDGs), each broken down to quantifiable targets. These goals are all integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental. For example, the objective of ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequalities and spur economic growth – all the while tackling climate change and working to preserve our oceans and forests.

Figure 1: The Sustainable Development Goals

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[2] https://sdgs.un.org/2030agenda

The Key Principles of the 2030 Agenda

The five critical dimensions

The 17 SDGs are grounded in 5 critical dimensions, commonly referred to as the 5Ps. By focusing on these 5 pillars of sustainable development, policymakers can better measure the sustainability of their intervention. The 5Ps are as follows: people, prosperity, partnership, peace, and planet.

Figure 2: The Five Key Principles of the Sustainable Development Goals

People: To end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment

Prosperity: To ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.

Partnership: To mobilize the means required to implement this Agenda through a revitalized Global Partnership for Sustainable Development, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.

Peace: To foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

Planet: To protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.

Benefits of the 2030 Agenda

The 2030 Agenda aims to

- ensure a better life for present and future generations
- lower the impact on the environment by reducing air, water and soil pollution
- help achieve long-term economic growth

In today's society, more and more individuals are aware of environmental and social problems. The youth of today are marching in the streets of our capitals demanding that more be done to protect the planet. There is greater demand for sustainable solutions which meets the needs of present issues (ecological, sociological and health) without negatively impacting future generations. And this demand is becoming more important in consumer patterns; consumers want more traceability and transparency in the goods they purchase. In turn, companies need to respond to these growing demands. The 2030 Agenda reflects these preoccupations. Standards can help to underpin these advancements.

Chapter 1 Quiz

- 1. The United Nations 2030 Agenda has seventeen
  - special determination grants
  - sustainable and durable goals
  - sustainable development goals
  - sovereign directions for the globe
- 2. The United Nations 2030 Agenda main objective is to
  - leave no one behind
  - transfer technology to developing countries
  - share wealth and prosperity
  - liberalize trading markets

- 3. Which is the main priority of the United Nations 2030 Agenda?
  - Environment
  - Society
  - Economy
  - They are equally important and one cannot progress without the others

Chapter 2: What is a standard?

A standard is a harmonized, documented way of doing something which has been developed by a group of experts. Standards are intended to be repeatable in a consistent manner. Standards can be used for the design, use or performance of products, materials, processes, services or systems. Standards cover a wide range of activities undertaken by organizations and used by their stakeholders. Standards are not static but evolve as economies, technologies and societies evolve over time and are subject to interpretation, application, and revision. It is easy to take them for granted, but standards ensure safety, quality, and functionality in virtually every aspect of our lives.

All standards are non-binding by nature. A standard will normally include claims for compliance to the standard itself, in other words, the document or guideline has a prescriptive meaning that specifies what the implementer should conform to. These are normative standards. These can be conceived on different levels, for example:

- At a company level, defining how a product should be designed within that company
- At an industry level, how all companies in that industry should design the product
- At a national level, defining how the standard should apply within a country
- At a regional level, defining how the standard should apply across a region
- At an international level, defining how the standard should apply globally

A standard can become obligatory if it is entered into a national or regional regulation. If concerning a product, this will then normally be called a **technical regulation**.

Some standards development organizations (SDOs) speak of "formal" or "*de jura*" standards to imply that these are more authoritative. This would be in contrast to standards of other SDOs and to "de facto" standards which become widely accepted without necessarily going through a strict normative process. These terms only have meaning for those SDOs that use them (and not necessarily for Government agencies or other SDOs that may not recognize a hierarchy of standards).

Legislators make broad use of standards to support policy directions. Taking into account the current reflections about governance and better regulation which recommend an increased use of co-regulatory and self-regulatory practices, it may be expected that the use of standards to support legislation will increase as well. The methods applied while referring to standards in legislation vary significantly.

Additional key terms

Vertical standard: A vertical standard focuses on standards which apply to a particular industry or to operations, practices, conditions, processes, means, methods, equipment, or installations.

Horizontal or general standard: A horizontal/general standard applies not just to specific industries, but to all industries in general. All businesses are impacted by horizontal standards, regardless of the product or operational development in the industry sector.

Areas where standards are used

Standards are in nearly everything that surrounds us. Credit Cards, USB cables, PDF format of documents, WiFi, paper sizes, personal protection masks, condoms…

A modern laptop has over 250 technical interoperability standards and depending on the make and model, that number could be significantly higher. Some of these standards are based on a company level, some are international standards, and some are covered by standards that have been protected by intellectual property rights policies.

Who develops standards?

Standards are necessary for all products and could be defined at a company level, at an industry level, at a national level or at an international level. Often standards which are developed for specific products will then be proposed to become an industry standard. Then an industry standard might become a national standard or international standard.

In principle, a certain level of technical competency is necessary to participate in the development of a standard. If working on standards for nuclear reactors, a certain level of expertise in physics or in engineering would be necessary. A five-star chef may not have the necessary expertise to assist in developing such standards, though such a chef may have other expertise that could contribute to other standards.

At an industry level or SDO level, experts come together in working parties or technical committees to develop standards. Often the experts are from organizations which compete with each other commercially. However, they recognize that everyone gains when a standard is well defined and used, so they contribute their expertise to make a common standard (for a product or process). They also may have a commercial interest in participating in the process in order to influence standard

development and/or be an early adopter. Such interests are usually balanced by the number of other participants developing the standard.

Standards are normally developed through consensus. This does not mean that there is unanimity, but that there are no sustained objections to a decision. This means the group of experts does not have to achieve a unanimous decision to progress; it does mean though that the contributing parties can live with the results and will not object or impede the progress of the development.

The goals of consensus are to make better decisions by giving voice to all stakeholders. Through an inclusive respectful process this fosters as much agreement as possible in the decision-making process and improves cooperation in the implementing of those decisions. Greater group cohesion and interpersonal connections can be achieved in a cooperative, collaborative group atmosphere.

The difference between standards and regulation

The main difference between regulations and standards is the obligatory nature of the former. Public authorities will define product characteristics or related processes and production methods with which compliance is mandatory. Standards may provide similar guidance but will normally remain voluntary. Clearly, the effectiveness of a regulation is much higher than a standard as everyone must comply with the first.

However, the difference can potentially stop there. The most effective regulations should be based on recognized international standards. International standards are developed by technical experts who know the products, processes and production methods. This ensures that the resulting standard is workable for the industry. A regulation which is not based on industry expertise may be complicated to put into place.

UNECE WP.6 recommends in its Recommendation D on Reference to Standards[3] that regulatory authorities should endeavor to apply reference to standards that respect their voluntary nature, and only enter the standard into regulation when deemed necessary. One of the reasons for this is the revision cycle of regulations and standards. Standards are usually revised regularly (every five years for example) which allows it to adapt to any changes in the market or technology. A regulation often

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[3] https://unece.org/DAM/trade/wp6/Recommendations/Recommendation_D_en.pdf

takes a certain amount of time to be agreed upon and usually has a longer lifecycle. So, by the time that a regulation is actually applicable, the market or technologies may have evolved. In the same way, a regulation may have been based on a pertinent standard and relevant at the time of application; the market, technology and relevant standard may evolve, and the regulation stays in place based on technical aspects that are outdated.

Basing regulation on internationally recognized standards also ensures a certain level of interoperability and harmonization across borders, easing the burden of compliance of private sector actors. This is particularly of importance for micro-, small- and medium-sized enterprises.

In summary, Figure 12 below demonstrates the relationship between standards and regulation and the various levels of standardization.

Figure 3: The nature of standards and regulations
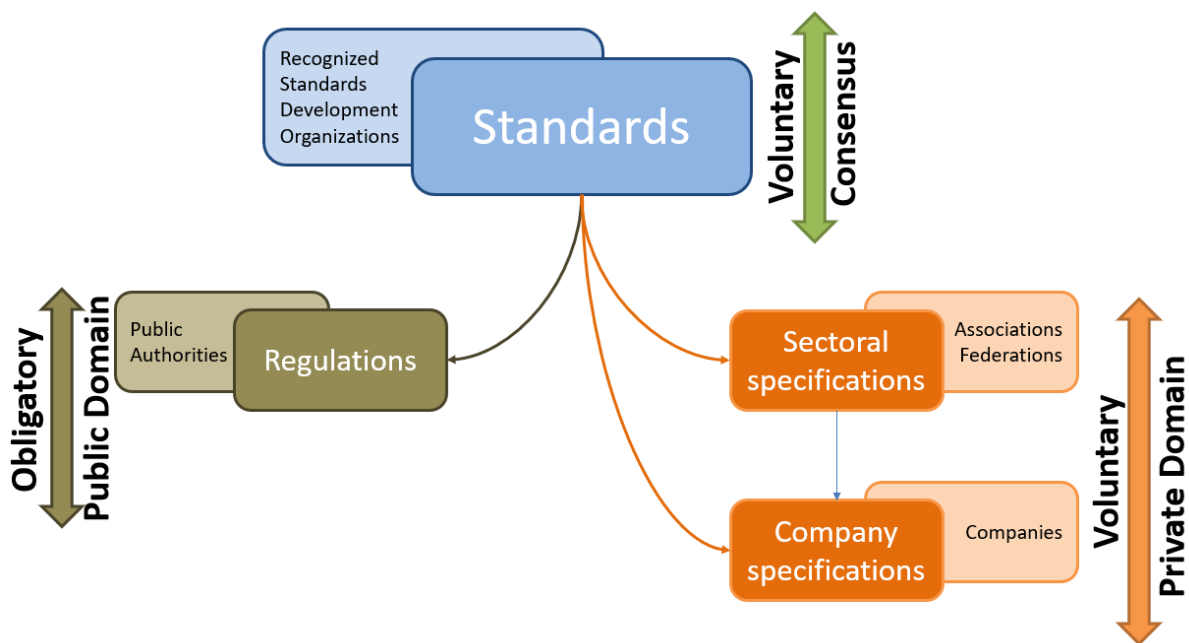
Source: UNECE Working Party 6

It is important to note that for many products, a regulation may not exist. This does not mean that there are no standards. In fact, there may be standards that are necessary for the product design even in the absence of formal regulations.

Chapter 2 Quiz

- Which of the following is false?
  - Standards are developed by a group of experts
  - Standards are obligatory
  - Standards are a documented way of doing something
  - Standards are intended to be repeatable
- Standards can be developed by
  - An individual company
  - An industry association
  - A standards development organization
  - All of the above
- Standards
  - Are only for technical products
  - Are only for regulations
  - Are in nearly every product that surrounds us
  - Are only for the safety of a product

Chapter 3: Harmonization and cooperation

Quality infrastructure is comprised of regulations, structures and bodies (such as accreditation, metrology, standards development bodies, market surveillance, conformity assessment) that exist in a country/economy for supporting trade on a fair market to promote safe products and services in a sustainable society. Quality infrastructure creates the enabling environment to ensure that products are safe for consumers and society while at the same time establishes an instrument to promote the economy. In today's world, standards play an increasingly important role.

International trade requires compliance with the regulations of multiple countries. When these are not aligned, it creates difficulties for traders to enter new markets. Standards provide a common language for defining products, services, and process requirements, helping to identify reference performance indicators concerning the safety, environmental and technical characteristics of products, to create a minimum reference level acceptability.

Standards support the effective interworking of different parts of complex systems and can define common test and measurement procedures, allowing a fair comparison of quality and performance among different products from different producers.

The role of UNECE WP.6 in standardization

Since the 1970s, the UNECE Working Party on Regulatory Cooperation and Standardization Policies (WP.6) has promoted the use of internationally recognized standards. In order to ensure that these are used in a consistent way across borders, it created Recommendation L on International Model for Transnational Regulatory Cooperation Based on Good Regulatory Practice.[4]

The UNECE Working Party on Regulatory Cooperation and Standardization Policies (WP.6)

- Develops recommendations to guide policy makers and SDOs
- Provides a neutral forum to convene member States, SDOs, country agencies, private sector and non-governmental agencies to promote cooperation and sharing of experiences

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[4] First published in 2001; updated in 2015. Available at:
https://unece.org/DAM/trade/wp6/Recommendations/Recommendation_L_en.pdf

- Raises awareness about new challenges of relevance to standardization and regulation, such as gender, the circular economy, digitalization, new technologies and other

WP.6 aims to promote regulatory cooperation, standardization policies and activities which contribute towards reducing technical barriers to trade, promoting sustainable development in its all dimensions including, for example, gender equality, climate and environmental protection, circular economy and the adaptation to new technologies.

The Working Party is a convening platform open to governments, regulatory bodies, and administrations, but also, standardization bodies, the private sector, and the wide range of bodies that make up a country's quality infrastructure. Historically, it has played an important advocacy role, promoting the use of standards by policymakers and businesses, as tools for reducing technical barriers to trade, furthering innovation, and competitiveness, promoting increased resilience to disasters, and fostering innovation and good governance.

UNECE Recommendation L

The UNECE RECOMMENDATION L promotes the establishment of Common Regulatory Agreements (CRA) to ensure good regulatory practices that facilitate global harmonization of national, regional and international regulation. Recommendation L also includes legitimate regulatory objectives related to public health, safety, or the environment protection; applicable international standards that contain requirements for systems, processes, products and services; provisions regarding third-party evaluation services when it is necessary to rely on third-party evaluation.

Excerpt of Annex A of Recommendation L

Principal elements for regulatory harmonization based on good regulatory practice in regulatory fields and accompanying trade and industry sectors.

The principal issues to be addressed by interested regulators in a Common Regulatory Arrangement (CRA) document, include:

- Legitimate regulatory objectives that usually relate to public health, safety, or environmental protection, etc.

- Applicable international standards that contain requirements for systems, processes, products, and services; ways of assuring and demonstrating compliance with the regulatory objectives.

- Provisions on third-party-assessment bodies, when recourse to third party assessment is needed.

Provisions for post-market surveillance.

The CRA specifies the following principal elements:

1. **Scope statement:** A statement of the products or product areas that are covered by the CRA. Regulators should agree on the products for which legitimate regulatory objectives are required. For this purpose, regulators may use international classification schemes such as the harmonized commodity description[5] and coding system[6].

2. **Product requirements:** Legitimate regulatory objectives reflect the requirements to protect public interest in areas such as human health/safety, animal/plant life health, or the environment. The requirements needed for protection of legitimate objectives should lay down the principal issues of concern and be specified in terms of performance requirements rather than design or descriptive characteristics. Requirements should be limited to relevant aspects and be proportionate to the hazard inherent in a given product or product area. The detailed provisions on how to meet the requirements of the regulatory objectives should preferably be specified in applicable international standards. Such standards will be referenced in the CRA.

3. **Reference to standards clause:** The CRA should contain a list of applicable international standards that correspond as a whole or partially to the requirements. The CRA may contain a provision that products complying with the referenced international standards are presumed to comply with the requirements.

4. **Compliance clause:** The CRA should contain a provision on how compliance is demonstrated. Regulators should agree on the range and contents of possible conformity assessment

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[5] Such as the World Customs Organization Harmonized System (HS), see
http://www.wcoomd.org/en/topics/nomenclature/overview/what-is-the-harmonized-system.aspx
[6] Coding systems may include sectoral codes, industry codes or private coding systems such as the GS1 Barcodes, see
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi
FhK2_lOn6AhVCiRoKHaTgD0oQFnoECBUQAQ&url=https%3A%2F%2Fwww.gs1.org%2Fstandards%2F
barcodes&usg=AOvVaw1UDQleUFySnj_wMDUJVr4w

procedures that are considered to give the necessary level of protection under the CRA. The CRA should also specify the conditions under which suppliers can make a choice if more than one option is provided for. Such options are, for instance, supplier's declaration of conformity, third party certification or inspection. In considering such options regulators should aim to avoid duplicative conformity assessment testing and certification for products (and replacement parts that are included in the product certification) that add unnecessary costs and time delays. When applicable, the CRA should also contain provisions on the conformity assessment bodies that are recognized to assess and attest compliance as well as the competence criteria to be fulfilled by such bodies.

5. **Market surveillance clause:** Regulators having agreed on CRA are responsible for market surveillance on their territory and have the right to withdraw products from their markets if these are not in compliance with the CRA. The CRA should contain a provision (protection clause) that if products claiming conformity with the CRA that do not conform to its requirements, the regulator may, with the intention to preserve legitimate objectives, withdraw such a product from its market. Furthermore, the CRA should contain a provision that the regulator using the Protection Clause should state specifically what products have been removed from the market and what requirements of the CRA have been claimed to be met but have not been met. In a case where products are in conformity with the CRA or the applicable international standard but are still found to endanger legitimate objectives, the regulator having agreed on a CRA could withdraw such products from the market or restrict free circulation. In this case, the use of the Protection Clause should also be subject to the condition that the regulator using it should indicate the reasons for this decision.

The UNECE Working Party on Regulatory Cooperation and Standardization Policies (WP.6) encourages increased regulatory coherence in specific sectors that have a critical impact on sustainable development and promotes greater resilience to natural and man-made hazards. WP.6 also works to promote the use of standards by policymakers and business as a tool for reducing technical barriers to trade, promote increased resilience to disasters, and to foster innovation and good governance. WP.6 advocates the use of standards in the implementation of UN-wide goals,

including the implementation of the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction[7].

Sendai Framework

The Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework) was the first major agreement of the post-2015 development agenda and provides Member States with concrete actions to protect development gains from the risk of disaster. The Sendai Framework works hand in hand with the other 2030 Agenda agreements, including The Paris Agreement on Climate Change[8], The Addis Ababa Action Agenda on Financing for Development[9], the New Urban Agenda[10], and ultimately the Sustainable Development Goals.

It was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR), and advocates for:

The substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities and countries.

It recognizes that the national authorities has the primary role to reduce disaster risk, but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.

Source: https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

UNECE portal on Standards for SDGs

The UNECE Standards for the SDGs portal presents information on standards and maps them according to the goals of Agenda 2030 for Sustainable Development. The Standards for the SDGs

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[7] https://www.undp.org/myanmar/publications/sendai-framework-disaster-risk-reduction-2015-2030?utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL&c_src=CENTRAL&c_src2=GSR&gclid=EAIaIQobChMI26LE6JXp-gIVNBoGAB25HAidEAAYASAAEgJpUvD_BwE
[8] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
[9] https://unfccc.int/news/addis-ababa-financing-for-development-explained?gclid=EAIaIQobChMIj5XDppbpgIVIfbVCh2NvwXaEAAYASAAEgIWNPD_BwE
[10] https://habitat3.org/the-new-urban-agenda/

portal[11] is a vital awareness-raising tool, and permits SDOs to further highlight the relevance of their work to Agenda 2030. The portal further assists policymakers – and all stakeholders looking for a toolbox to implement the SDGs – with a platform to identify standards and access success stories on their implementation.

The mapping database covers all SDGs with contributions from all major international standards development organizations (ISO, IEC, ASTM, IEEE, WIPO, ICAO, CEN/CENELEC, and UNECE). There are currently over 20,000 standards mapped in this portal.

In addition to the standards database, the portal contains case studies on how standards have been used as the basis for policy interventions by local and national authorities. There are over sixty case studies on the platform, providing examples for contributing to seven SDGs through the use of standards. There are also a dozen expert commentaries from standards development organizations underlining the importance of standards to achieve the SDGs.

Standards provide confidence

In recognition of the fact that trade and investment opportunities are expanding into non-traditional service areas, businesses are increasingly looking for certification and accreditation of services and their processes. International standards are critical to ensuring that processes, products, and services are fit for purpose, interchangeable, compatible, allow for better utilization of resources and create better communication across borders.

Every product coming into the market is bound to follow the required standards. if it does not, it will not be allowed entry. The standards are there to protect consumers, the economy and the environment; they also ensure that there is a certain level of quality. Standards provide confidence to consumers. Though they are often invisible, there is normally no doubt in people's confidence to consume the products as long as they trust that their Government is taking the necessary measures to ensure that the products on the market are safe, of a sufficient quality and not pirated.

Standards also provide confidence for producers. Products that are compliant to the regulations (including technical regulations) will be able to be put on the market. In the absence of specific

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[11] https://standards4sdgs.unece.org/

regulations on certain products, the use of a recognized international standard is usually sufficient to be assured that they will be able to sell their product on a market.

If producers do not comply with the regulations and/or recognized international standards, they run a risk that their products will never make it to market. They may also be identified as a potentially non-compliant company and risk increased controls and inspections for future products even when they are fully compliant, increasing their time to market and production cost.

Standards can help reduce technical barriers to trade

Technical regulations and standardization activities need to be coordinated to avoid creating technical barriers to trade as described in the World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT)[12] including Code of Good Practice on the Preparation and Adoption and Application of Standards. The WTO TBT Agreement facilitates the implementation of international and regional standards by integrating their inclusion as a whole or with respect to some factors based on each country or region.

The use of international standards supports and promotes harmonization of all the valuable tools for the business community to do business on globally universal grounds. This supports the SGD-17, as demonstrated in the WTO TBT article 10.3:

- The members and corporations are invited to follow the standards related to their requirements for imports and exports and other business formalities.
- The members and organizations are also welcomed to provide their valued input on the related international standards through the influential organizations but remain in their designated resources.
- Information sharing and practices best used to follow the international standards are to be disseminated through procedures developed by the committee.
- The same committee also invites the international organizations to provide their input and a good way forward if there is a requirement to change global trade standards.

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[12] https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm

Standardizing information exchange

Reducing obstacles to trade also includes the exchange of information both in its paper format and electronically. In both cases, it is necessary to ensure that it is standardized in order to ensure clear understanding of the information being transmitted. The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has developed a series of standards which promotes the harmonization of information exchange:

- The United Nations Layout Key is the basis for nearly every single international trade document in the world.
- The UN/EDIFACT standard for electronic data exchange is widely used, with, for example, shipping companies exchanging more than 1 billion UN/EDIFACT messages per year, covering more than 75% of sea-freight worldwide.
- Most National Single Windows in the world – which streamline cross border operations – use UNECE's recommendation.
- Over 100,000 locations are registered in 249 countries with UN/LOCODE – the unique code for identification of ports, airports, inland depots, freight terminals and other transport locations.

By promoting the simplification and harmonization of e-business processes, making them both more efficient and easier to handle, UN/CEFACT helps ensure that all stakeholders can fully benefit from the global and digitalized market.

Chapter 3 Quiz

- Which are tools developed by UNECE WP.6 to promote harmonization and cooperation?
    - Recommendation L International Model for Transnational Regulatory Cooperation Based on Good Regulatory Practice
    - Sendai Framework for Disaster Risk Reduction Standards are a documented way of doing something
    - Agreement on Technical Barriers to Trade (TBT)
    - All of the above
- How can standards provide confidence
    - Consumers apply standards in a consistent manner
    - Producers are sure that compliant standards can be placed on the market
    - Regulators give a certificate to international standards development organizations
    - All of the above

- The UNECE Portal on Standards for SDGs provides
    - A mapping of all standards to the goals of the SDGs
    - Case studies demonstrating that international standards development organizations apply the 2030 Agenda
    - Testimonies for standards development organizations that their standards are the best to achieve the SDGs
    - All of the above

Chapter 4: How standards can help achieve SDG; example of gender and environment

Standards define product and process specifications. These have traditionally been in order to ensure safety of the public, of the society and of the environment. Standards are present in everything that surround us on daily basis. It is possible to integrate into the standards themselves, aspects of sustainable development as well in order to promote either directly or indirectly the achievement of specific SDGs.

Gender-responsive standards (SDG5)

In 2016, WP.6 launched its work on gender-responsive standards. This aims to ensure that women are involved in the development process of standards and that the resulting standards are appropriate for all of the population – both women and men. This is not necessarily directly linked to the traditional preoccupation of product standards (safety of the public, of the society and of the environment); it is more a social aspect foreseen in SDG 5 on gender equality (though in many examples, it can also concern safety of women). More information on this work is available on the WP.6 website.[13]

WP.6 has established a network of experts on the topic and developed a *Declaration for Gender-Responsive Standards and Standards Development* within its *Recommendation U on Gender-Responsive Standards[14]* which now has seventy-nine signatories (as of October 2022). Each of these signatories has taken an engagement to ensure that their standards and standards development is gender-responsive and in many cases has developed gender action plans. Results are starting to be visible, and we see international standards which have been developed with a gender lens. These standards can then enter into product design and eventually Government regulations.

This clearly demonstrates that sustainable development aspects may be entered into standards which can then influence products and processes. If we truly want to achieve the 2030 Agenda on sustainable development, then standards are an excellent means to work towards that goal.

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[13] See: https://unece.org/gender-responsive-standards-initiative
[14] See: http://www.unece.org/DAM/trade/wp6/Recommendations/Rec_U_en.pdf

The case studies on the Standards for SDG portal provide some examples from national experience. One example is the case study on climate action in Ireland.

Standards & Environment (SDG 13)

Standards Supporting the Sustainable Development Goals (SDGs) – In Particular SDG 13 Climate Action – Ireland

Standards have a key role to play in supporting the development of the built environment to adhere to the Sustainable Development Goals, the EU Green Deal objectives and to Ireland's emissions targets. The Government's Climate Action Plan (CAP) 2021 put in place a wide-ranging decarbonization pathway to 2030. In July 2021 the Government passed the Climate Action and Low Carbon Development (Amendment) Bill, which commits Ireland to achieve net-zero greenhouse gas emissions by the year 2050. Climate action –SDG 13 – has never been higher up the agenda, and standards have an important role to play. CAP 2021 highlights that:

"The transition to an energy efficient and fossil fuel free built environment will provide extensive social, economic and environmental benefits in the short- as well as long-term. This process will bring about reduced energy costs and more comfortable, healthier, safer, and less costly to heat and cool, homes enhancing our living standards, improving our air quality, and helping to address energy poverty. It will also improve energy security and reduce Ireland's dependence on fossil fuels in addition to other significant co-benefits for the environment and socio-economic development."

Existing standards like ISO 14001 Environmental Management and ISO 50001 Energy Management cover all aspects of energy savings, water, and air quality. They provide a systematic framework to support organizations to minimize their environmental footprint and provide accurate methods of measurement. Their broad use helps reduce the environmental impact of industrial production and processes, facilitates the reuse of limited resources, and improves energy efficiency. The development of standards also provides important opportunities for strategic collaboration and support. For example, under the CAP 2021, working in partnership with other public organizations, NSAI manages the production of certain standards deliverables to support climate actions, including under:

CAP Action 138: Publish a standard recommendation for the design, installation, and commissioning of solarPV panels in new and existing dwellings

Standards deliverable: S.R. 55:2021 Solar photovoltaic micro-generators for dwellings - design, installation, commissioning, and maintenance [Status: complete]

CAP Action 161: Publish an Irish Standard to enable organizations apply a systematic approach to energy efficient design throughout the various steps of design, construction, and commissioning of investment projects

Standards deliverable: I.S. 399:2021 Energy efficient design – Requirements with guidance for use [Status: complete]

CAP Action 225: Update the energy efficient retrofit of dwellings guidance document

Standards deliverable: S.R.54 Code of practice for the energy efficient retrofit of dwellings [Status: ongoing as of Feb 2022]

The potential of standards to tangibly contribute to the SDGs is significant. Each year, NSAI publish on average 2,000 standards, including in the areas of Innovation Management and Design for All. In 2018 NSAI joined standards bodies around the world in signing the UNECE Declaration on Gender-Responsive Standards and Standards Development. NSAI continues to strengthen its understanding of the SDGs so that standards processes, and deliverables can be viewed through the lens of sustainable development.

Source: https://standards4sdgs.unece.org/sites/default/files/2022-03/_SDG%2013%20-%20Ireland.pdf

Chapter 4 Quiz

- The UNECE WP.6 Gender-Responsive Standards Initiative aims to ensure
  - Women take the lead in standards development
  - Standards are developed with a gender lens
  - Separate standards for women are proposed
  - All of the above
- It is possible to influence products and processes through standards in order to ensure that sustainable aspects are taken into account
  - True
  - False

- The climate action example from Ireland demonstrates that the use of standards
    - can contribute to reducing energy costs
    - can help to achieve the Government's climate objectives
    - can reduce dependence on fossil fuels
    - All of the above

Chapter 5: Mapping standards to the SDGs

Standards development organizations are encouraged to identify to which SDGs their proposed standard can contribute. This in turn produces the mapping of standards to the SDGs like the one on the UNECE WP.6 website "Standards for SDGs portal."[15] However, it is not necessarily easy for the technical committees working on standards to identify the pertinent SDGs; they are often not experts on the SDGs.

Example of SDG 5

Some choose the SDG based on its general name alone: "gender equality". This will work in the majority of cases. However, it is important to understand that underneath that general name, there are a series of targets and indicators to explain exactly how the SDG success will be measured. For example, there are nine targets under SDG 5 on gender equality, each with a number of indicators:

Excerpt of SDG 5 targets and indicators

- 5.1, End all forms of discrimination against all women and girls everywhere
    - 5.1.1, Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
- 5.2, Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
    - 5.2.1, Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age
    - 5.2.2, Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence
- 5.3, Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
    - 5.3.1, Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18
    - 5.3.2, Promotion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting by age

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[15] https://standards4sdgs.unece.org/

- 5.4, Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
  - 5.4.1, Proportion of time spent on unpaid domestic and car work, by sex, age and location
- 5.5, Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
  - 5.5.1, Proportion of seats held by women in (a) national parliaments and (b) local governments
  - 5.5.2, Proportion of women in managerial positions
- 5.6, Ensure universal access to sexual and reproductive rights as agreed in accordance with the Programme of Action of the International conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
  - 5.6.1, Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care
  - 5.6.2, Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education
- 5.a, Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
  - 5.a.1, (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure
  - 5.a.2, Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control
- 5.b, Enhance the use of enabling technology, in particular information and communication technology, to promote the empowerment of women
  - 5.b.1, Proportion of individuals who own a mobile telephone, by sex
- 5.c, Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels
  - 5.c.1, Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment

Source: https://sdgs.un.org/goals/goal5

This long list, reproducing the goal, the targets and the indicators for SDG 5 on gender equality is to demonstrate the areas where the 2030 Agenda is looking to make improvements (targets) and how the results will be measured (indicators).

A standard for "women's tennis shoes" may have the word "women" in the name of the standard, but it would not be appropriate under any of the above targets or indicators. So, it should normally not be mapped as helping to achieve the SDG 5.

To the contrary, a standards development organization which is applying the principles of gender-responsive standards and which is developing a standard for agricultural machinery could be relevant for 5.a and indicator 5.a.1 as the machinery, if appropriately designed with a gender lens could help empower women to work land for agricultural purposes. So even if the resulting standard doesn't say "women's" agricultural machinery standard, it could still contribute to the achievement of the SDG 5 and could be mapped accordingly.

Directly contributing / Indirectly contributing to an SDG

The example above on an agricultural machinery standard which was developed with a gender lens is a good example of an indirect contribution. SDG target 5.a is about land ownership, and indicator 5.a.1 is about ownership of agricultural land. Neither of these are about agricultural machinery. However, if the machinery developed on a market is not workable by women, then it will be difficult for women to own and exploit agricultural land. Women will need machinery which is designed for their needs as well as that of men, allowing them to be able to work on the land and effectively own it. So, though it is not directly contributing to ensuring the legal access to agricultural land, it is contributing to ensuring that agricultural land owned by women can be exploited on an equal basis to same or similar land owned by men.

An example of standards with a direct contribution to SDG 5 are those for mobile phone devices which are gender responsive. Mobile phones which are too big for women's hands, for example, can exclude them from accessing that technology. As the indicator 5.b.1 measures the proportion of mobile phone owners by sex, if women cannot use the devices, the proportion of ownership of the mobile phones will be lower. Creating standards to ensure equal access to this technology directly contributes to the indicator 5.b.1.

Currently, there is no measuring mechanism to determine the pertinence of a standard to an SDG, so both directly contributing and indirectly contributing to the achievement of the SDG targets and

indicators justifies mapping the standard to that SDG. However, if the indirect contribution is very remote or the contribution is very low, it could be misleading to map it to that SDG. For example, a standard for a contraceptive could in principle be mapped to target 5.6; however, 5.6 is about the legal rights and not about the actual contraception itself. Of course, in order for the legal rights to be in place, the contraceptive products need to exist, but the indicators demonstrate that it is about the ability to make informed decisions and education, so the link between such a standard and this indicator would be further removed than the example of the agricultural machinery which enables 5.a.1. This of course, could be up for debate; the example is just to demonstrate that the impact of the standard to target 5.6 is not as direct.

The most effective mapping of a standard to any SDG will be through careful consideration of the targets and indicators of the SDG itself and not based on a gut interpretation of the name of the SDG.

Chapter 5 Quiz

- Any standard that has the word "women" in the name can appropriately be mapped to SDG 5.
    - True
    - False
- When mapping a standard to the SDGs, it is important to take into consideration
    - The targets of that SDG
    - The indicators of that SDG
    - The process of standard development
    - All of the above
- A standard which is indirectly pertinent to the achievement of an SDG
    - Uses one of the key words of the SDG
    - Contributes to enabling the achievement of the targets or indicators of the SDG
    - Indirectly ensures sustainability is possible
    - All of the above