Standards: A Key to Unlock the SDGs

Lorenza Jachia
Secretary, Working Party on Regulatory Cooperation and Standardization Policies (WP.6)
United Nations Economic Commission for Europe (UNECE)
The Project on “Standards for the SDGs”

Three objectives:

1. Raising awareness among standards bodies on the 2030 Agenda
2. Promoting the use of standards as a tool for policymakers, authorities, the civil society, business communities, and other stakeholders, for sustainable development
3. Breaking silos, work across various organizational cultures and methods of work
Deliverables of the «Standards for the SDGs» project

Case Studies

Database

<table>
<thead>
<tr>
<th>SDG Goal</th>
<th>SDG Targets</th>
<th>Organizations</th>
<th>Technical Committees</th>
<th>Standard</th>
<th>Column 7</th>
</tr>
</thead>
</table>

Enter your search terms here...
Case Studies

• **Practical experience of policy makers** using international standards for sustainable development

  - Presented by regulatory authorities, governments and administrations, as well as regional groups

  - Based on a template that prompted policymakers to present the challenge or policy issue and the standards used to address it

  - Focused on:
    - **SDG6** – Clean Water and Sanitation
    - **SDG7** – Affordable and Clean Energy
    - **SDG11** – Sustainable Cities and Communities
    - **SDG13** – Climate Action

  - Examples ranging from the subnational and national to the global levels, and from all regions

  - Strategy
    - Developing an extended version of IEC 61721 is crucial to adapt the tests to different climate-related conditions, and to provide a model that allows to simulate the loss of power and the condition factor between the accelerated laboratory test and the actual operation conditions. Likewise, in the test protocols, it seems pivotal to take into account the high levels of UV radiation under real operating conditions in the Atacama Desert area.

  - Results and Impact
    - The current IEC standards have been conducive to the greater adoption of solar PV in Chile. This has reached a 5% share of generation in the national energy mix and contributed to an estimated reduction of 2.2 million tonnes of CO2e in 2017.

    - It is necessary to advance the development and extension of the current IEC standards, with the aim of ultimately relying on standards, which could guarantee long-term operation and accurately estimate the lifetime of photovoltaic systems, in different climatic and radiation conditions.

    - Specific challenges for areas with high solar generation potential, such as the Atacama Desert, present three main technical challenges that need to be taken into account as part of the development of new IEC standards and or when updating existing ones, so as to avoid the maximum emissions of CO2e.

    - The rise in and desert zones, highlights the need for greater sharing of behavior knowledge and certification of PV systems – under Atacama Desert conditions – to other desert zones. The adoption of zero-emissions PV technologies could mitigate many of the most challenging aspects of life in such desert conditions.

  - Challenges and Lessons Learned
    - When satisfied that the demonstrated supplier certifications are sufficient, project developers will seek the option with the lowest cost. Whist some larger companies may purchase the services of able suppliers who provide extended certifications to achieve greater quality, this is not necessarily an option available to all market actors.

    - Challenges arose from the lack of awareness of the impact of radiation conditions on the long-term performance and durability of solar modules and systems.

  - Potential for Replication
    - As a continental leader in the development of solar PV, Chile’s experience can inspire others to develop renewable systems. Further, the standards for photovoltaic systems, which guarantee performance and reliability under specific climatic conditions (e.g. Atacama Desert), would equally serve as a benchmark for replication.

Contact Name: Ana Marina Ruz
Organisation: Chilean Solar Committee - COFO
Objectives & Methodology of the Case Studies

- UNECE received more than **90 case studies** written and submitted by the policymakers in charge. 26 of them were selected on the basis of predetermined criteria.

- Case studies received by reaching out to policymakers either directly or through the Secretariats of partner organizations, including:
  - ASTM International
  - Global Reporting Initiative (GRI)
  - International Electrotechnical Commission (IEC)
  - Institute of Electrical and Electronics Engineers (IEEE-SA)
  - International Organization for Standardization (ISO)
  - International Union for Conversation of Nature (IUCN)
  - International Telecommunication Union (ITU)
  - United Nations Framework Convention on Climate Change (UNFCCC)
  - UN-Water
  - World Health Organization (WHO)

<table>
<thead>
<tr>
<th>SDG Goal</th>
<th>SDG Targets</th>
<th>Organizations</th>
<th>Technical Committees</th>
<th>Standards</th>
<th>Sources</th>
</tr>
</thead>
</table>
| 6 CLEAN WATER AND SANITATION | 6.1 Water Access  
6.2 Sanitation  
6.3 Water Quality  
6.4 Water Efficiency  
6.5 Water Resource Management  
6.6 Water Ecosystems | ISO/TC 13500 | E50.5  
Environmental Risk Management | E1689.95:2014 | Source |
| 7 AFFORDABLE AND CLEAN ENERGY | 7.1 Reliable and Modern Energy Services  
7.3 Energy Efficiency | ISO/TC 301  
| 11 SUSTAINABLE CITIES AND COMMUNITIES | 11.1 Access to Basic Services  
11.2 Transport Services  
11.3 Governance and Ethics  
11.4 Protect and Safeguard Cultural Heritage  
11.5 Protecting the Poor and People in Vulnerable Situation | ITU-T Study Group 20 et al.  
ITU | Recommendation ITU-T Y.4903/L.1603 | Key Performance Indicators (KPIs) for Smart Sustainable Cities (SSCs) to Help Cities Achieve Sustainable Development Goals (SDGs) |
| 13 CLIMATE ACTION | 13.1 Resilience in Climate-Related Hazards  
13.3 Climate Change Mitigation and Impact Reduction | WWF Network  
WWF Network | WWF Standards of Conservations Project and Programme Management | WWF Programme Standards |
Current Status: 1,600 Standards and Counting

The database allows users to:

• Cross-reference standards through a dynamic search
• Identify standards that support specific policies
• Link standards to SDGs and associated targets (currently, SDG6, SDG7, SDG11 and SDG13)
Way forward

The project now aims at:

• Carrying out rigorous analysis of the case studies with a view to developing policy recommendations (both general and at the level of the four sectors)

• Developing the database further by adding filters and functionalities and possibly adding other SDGs if resources permit

• Maintaining the database up to date

• Enhancing understanding on the benefits of using international standards for sustainable development
Thank You!

Lorenza Jachia
Secretary, Working Party on Regulatory Cooperation and Standardization Policies (WP.6)
United Nations Economic Commission for Europe (UNECE)
lorenza.jachia@un.org