

## Green Quality Dialogue - Summary Report -

On 4 November 2016, the German metrology institute (PTB) and the International Renewable Energy Agency (IRENA) jointly organised a dialogue event on the potential of quality assurance services for the promotion of renewable energies, energy efficiency, climate change and environmental protection. The event took place at the premises of the German Federal ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) in Bonn, Germany. It was attended by high level guests of International and German institutions active in the fields of renewable energy, climate change and international cooperation. The private sector was also represented. From PTB side, the event was organised by the Latin America and Caribbean (LAC) working group, which meant a regional focus was incorporated into the programme as well.



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### Key messages

The dialogue event discussed i.a. the following key messages:

- Quality assurance is an essential factor for the deployment of renewable energy technologies however, it needs to be better understood and further promoted to trigger deeper impact and reach all stakeholders
- The value of high quality products is particularly important for different project stakeholders, who are liable for the project performance, at different periods during the life cycle of a project
- Standardisation has been mainly linked to the promotion of trade. However, in the context of the climate change agenda and protection of the environment, the role of quality assurance is of growing in significance as well, e.g. for verification methods for GHG
- Standardisation in this field is implemented by a large number of actors, e.g. UNFCCC, ISO, IEC and many private actors. Harmonisation is needed in order to become more effective
- Necessary and beneficial quality assurance services need to be sensitively coordinated with regulations and requirements in order not to exclude economically disadvantaged stakeholders who may not have the financial means to support costly quality assurance services

## Speaker inputs and panel discussions

The programme was divided into two sessions, each featuring individual speakers and presentations, followed by a panel discussion. The panel discussions provided opportunities to ask questions and comments on the preceding presentations.

### Session 1: The role of quality assurance for renewable energy

Session 1 focussed on the nexus of quality assurance, infrastructure and services for the promotion of renewable energies, incorporating four presentations by representatives of the German Ministry for Economic Cooperation and Development (BMZ), the International Renewable Energy Agency (IRENA), Solar World and the German Metrology Institute (PTB) followed by a panel discussion on quality infrastructure and energy.

The first presentation by **Christoph Rauh** (regional department Latin America, **BMZ**) briefly showcased the **current BMZ agenda for Latin America and the Caribbean**. Mr. Rauh highlighted the meaning of renewable energy and climate protection policies for the ministry and exemplified the BMZ policies in this area along several country cases. Some Latin American countries (Bolivia, Brazil, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico and Peru) remain primary partnership countries of the BMZ, many of them supported in their energy and climate protection programmes. At the same time, he highlighted the **diminishing financial support of BMZ to the region**.

The second presentation by **Francisco Boshell (IRENA)** concentrated on the **rapid growth of renewable energies** within the last few years and he mentioned **2015 as a record year for renewables** as e.g. the capacity of installed wind and PV power grew by about 25% compared to the previous year. At the same time, costs for renewables continue to fall and thus, record investments in the sector are realised while an increasing number of countries have RE policies in place, too. Significant improvement is still needed in LAC where power generation is still based on traditional sources to a large extent. But the energy mix is moving towards a higher percentage of renewables. At the end of his presentation he also provided some examples on the impact of standards and conformity assessment on RE markets.

The third input, given by **Romy Acosta (Solar World)**, explained the **view of the private sector** on issues of quality services and assurance for the growths of renewable energy technologies. She focussed in her presentation on quality challenges for solar markets. Solar PV is slowly growing in LAC, in particular in the leading LAC markets of Brazil, Mexico and Chile. Ms Acosta explained the relatively small impact of maintenance costs to the overall financing of the project but **determined quality assurance as one decisive factor of realising such kind of projects**. Furthermore, she elaborated on the risks of low quality products having the potential to push out high quality equipment as it comes with lower initial costs. As often the focus is geared to short term gains, low quality products sometimes are preferred over good quality products. This means there is **still a lot of work necessary in terms of awareness and sensitisation** in this area. She also elaborated on a model illustrating risk allocation of a new project over time. The conclusion was that **quality is especially relevant to various stakeholders at different times of the projects life cycle**. In addition, she explained the connection between high quality products and amounts of waste and costs. The higher the quality of a product the least waste can be expected.

Complementing the first session of speakers, **Mr. Christian Goethner (PTB)**, illustrated the **direct link between components of quality assurance/infrastructure and energy efficiency and promotion of renewables**. He spoke about the **significance of reliable measurements** for energy efficiency and renewables, e.g. radiation for PV. Furthermore, he talked about labelling and

mentioned the European labelling system as a role model for LAC, where the labelling systems are rather designed different by each country and not harmonised.

After the presentations, the audience had the opportunity to ask the speakers about any matters of interest related to the content of the presentations. Matters of interest **were minimum standards and directives on European level for renewable energies** (A: no specific directives for Solar PV systems but minimum standards important), **coordination of ministries to support deployment of renewables** (A: better coordination needed, e.g. environment, transport and agriculture for biofuels) and **the specific role of LAC in promoting renewable energies** (A: more innovation needed, such as FiT, standards and technical regulations for grid codes; reliable systems need to be in place – as in Germany – for investors to plan ahead and exclude risks; interesting sector can be electrification of transport but not easy in some areas) as well as the **issue of carbon footprints of renewable energies** (A: carbon footprint needs to be evaluated against other power sources; can be more or less related to project circumstances). Furthermore, the issue of **low quality products from China** (A: China exports low as well as high quality products, often it is more a matter of what the customers' requirements are; but still China very prominent as approx. 80% of PV modules currently come from China) and **public-private partnerships** (A: private companies can support local industry, urban areas and transport systems as example) were discussed as well.

## Session 2: Quality assurance and climate change

Session 2 discussed the **relevance of quality assurance for climate change and protection of the environment**. Three presentations facilitated by the German Development Institute (DIE), the United Nations Framework Convention on Climate Change (UNFCCC) and the German Metrology Institute (PTB) were again preceding the subsequent panel discussion.

In his presentation **Tilman Altenburg of DIE** spoke about the **green economy**, the additional efforts states need to do in order **to reduce the carbon budget** and to achieve a maximum increase of 2d C (Paris agreements) and the relevance for LAC. The notion of “grow first, clean up later” is still very prominent in some LAC governments but there are many incentives to transform to green economies.

**Mr. Xing Zhang of UNFCCC** illustrated the debate by talking about **challenges in the climate change agenda**. He discussed the outcomes of the Paris Agenda and highlighted **mechanisms and pathways** how to achieve the goals.

The last presentation of the second session, held by **Ms Monica Garcia of PTB** illustrated the meaning of **quality assurance/infrastructure for climate protection**. She specifically mentioned the need for QI services not only for the “traditional” area of international trade and reduction of barriers to trade but **explained its meaning for the protection of environment and identified conformity assessment services**, such as monitoring, inspection, certification and verification as indispensable in this area. One particular example is the measurement, **validation and verification of GHG** which is an essential element in light of aiming at the Paris agreement targets.

The following panel discussion discussed questions of the **100 billion USD GCF contribution** (A: up to now states only have contributed a small percentage of the budget), on **challenges to import GHG reference material** (A: LAC mostly receives such costly equipment from overseas, that is Europe or the US but wants to establish its own markets, meaning only few countries produce the GHG reference material and share it across LAC (only a small number of countries - most likely Brazil, Mexico, Argentina - is going to have primary standards while others will have secondary standards). So far challenges are involved in this idea and traceability can only be received from overseas markets. How will it be possible to establish the LAC markets? In a subsequent comment,

the question of the **amount of measurement in GHG** was posed (A: not everything can be measured but rather calculated on models, e.g. age, species...). However, **many methodologies how calculation can be done in place. There are UNFCCC standards for CDM projects. It is very important to closely coordinate with ISO/IEC and many private initiatives. More work in this area is of utmost importance**, also not to duplicate work! The last topic covered touched upon the **costs and extent of QI services**. What about stakeholders who are not able to finance expensive QI services? (A: a balance between benefiting stakeholders and not excluding others needs to be found).

The event was **successful in showcasing the links and reciprocal influence of quality assurance services, promotion of renewable energy/energy efficiency and climate change/environment protection**. Furthermore, the event enabled a space for networking between all the participants, fostering as well future collaboration activities between IRENA and PTB.



## Programme

**Objective** Experience exchange on the potential of Quality Infrastructure Services for sustainable economic development, especially Renewable Energies/Energy Efficiency and Climate Change, in the framework of the German Development Cooperation Policy

**Participants** Panel guests: representatives of BMZ, DIE, IRENA, PTB, Solar World, UNFCCC; Audience: 35 participants of PTB group (Regional and German Quality Infrastructure Experts working in BMZ-projects) + Guests (GIZ, KfW, IRENA, UNFCCC, BMZ, DIE)

**Venue** Federal Ministry for the Environment (Bundesumweltministerium: BMUB), Robert-Schuman-Platz 3, 53175 Bonn, room 1.150 (first floor)

**Date** November 4, 2016; 8:30 – 12:30h

Time	Sequence	Speaker
08:30 – 09:00	<b>Registration</b>	
09:00 – 09:05	<b>Welcome</b>	IRENA, PTB
09:05 - 09:20	<b>Introductory Remarks on BMZ Policy for Latin America with a Focus on Climate Change and Energy</b> (incl. 3-5 min for questions)	BMZ (Regional Department LAC)/ Christoph Rauh
09:20 - 09:40	Presentation: <b>Quality related Challenges to Promoting Renewable Energies</b> (incl. 3-5 min for questions)	IRENA/Francisco Boshell
09:40 – 09:55	Presentation: <b>Quality Challenges for Renewable Energy Markets – A Private Sector Perspective</b> (incl. 3-5 min for questions)	Solar World/Romy Acosta
09:55 – 10:15	Presentation: <b>Quality Infrastructure Development for Renewable Energies, Electric Grids and Energy Efficiency</b> (incl. 3-5 min for questions)	PTB/Christian Göthner
10:15 – 10:40	<b>Q&amp;A Panel on Quality Infrastructure and Energy</b>	BMZ, IRENA, Solar World, PTB
<b>10:40 – 11:10</b>	<b>Coffee Break</b>	
11:10 – 11:25	Presentation: <b>Relevance of Green Economic Development for LAC with special emphasis on 4E and Climate Change</b> (incl. 3-5 min for questions)	DIE/Tilman Altenburg
11:25 – 11:45	Presentation: <b>Challenges in the Climate Change Agenda</b> (incl. 3-5 min for questions)	UNFCCC/Xing Zhang
11:45 – 12:00	Presentation: <b>Quality Infrastructure for Climate Protection</b> (incl. 3-5 min for questions)	PTB/Verónica Garcia
12:00 – 12:25	<b>Q&amp;A Panel on Quality Infrastructure and Climate Change</b>	BMZ, DIE, PTB, UNFCCC
12:25 – 12:30	<b>Closing remarks</b>	PTB, IRENA
<b>12:30</b>	<b>Lunch</b>	