

# EXTERNAL EVALUATION – SHORT REPORT

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Strengthening of the Regional Quality Infrastructure in the Caribbean in the Areas of Energy Efficiency and Renewable Energies



Country | Region: CARICOM countries (Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago) and the Dominican Republic

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Executing Agency: CARICOM Secretariat  
Implementing Partner: CROSQ and INDOCAL

PTB | Working Group: 9.33 Technical Cooperation with Latin America and the Caribbean  
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This is an independent evaluation. The contents represent the view of the evaluator and cannot be taken to reflect the views of PTB.

**List of abbreviations**

BMZ	German Ministry for Economic Cooperation and Development
CARICOM	Caribbean Community
CROSQ	CARICOM Regional Organisation for Standards and Quality (CROSQ)
ECELP	Eastern Caribbean Energy Labeling Project
EE	Energy Efficiency
INDOCAL	Instituto Dominicano para la Calidad
NSB	National Standards Bureau
PAC	Project Advisory Committee
PTB	Physikalisch-Technische Bundesanstalt
QI	Quality Infrastructure
RE	Renewable Energy

## 1. Project Description

With few exceptions, the Caribbean states are highly dependent on fossil energy imports. This, in combination with low-efficient power generation, means that electricity costs almost everywhere are markedly higher than in other countries. The situation is aggravated by the fact that appliances are often outdated and inefficient and consumer information about energy-efficient products is practically non-existing. Therefore, electricity expenditures affect negatively private household budgets, but also the operating costs in the service, commercial and industrial sector, creating a disadvantage for competitiveness on the global market and hindering the economic development of the region. On the other hand, small-scale renewable energy (RE) technologies, such as photovoltaic and solar water heating systems, are facing substantial quality problems due to missing standards and controls.

The core problem addressed by the project is the lack of a well-established Quality Infrastructure (QI) for energy efficiency (EE) and RE technologies in the Caribbean Community (CARICOM) region and the Dominican Republic, namely a concerted system of harmonized standards, internationally recognized testing and inspection services and product certification in order to effectively implement an energy labelling programme which positively impacts the market towards an increased level of energy-efficient appliances and lighting products available in the retail stores. Strengthening the QI is expected to make a significant contribution to a) increasing consumer protection and in the longer term developing a quality consciousness and control in the region, b) energy saving goals and the implementation of national and regional sustainable energy policies and approaches, c) reducing greenhouse gas emissions, and thus climate mitigation.

Fostering the CARICOM Regional Organisation for Standards and Quality (CROSQ) at the macro and meso level in its coordination efforts and technical support for the National Standards Bureaus (NSB) of the member states, as well as cooperation with the second implementing partner, the *Instituto Dominicano para la Calidad* (INDOCAL), form pivotal elements of this project approach. Aspects of harmonization of standards and labelling systems are only possible via the mandate and work of CROSQ, while the implementation and provision of specific services such as testing and measurement is the task of the NSBs (meso level). These institutes are advised and supported in the establishment and further improvement of services, and their staff members are trained accordingly.

The project is mainly executing the following activities in the area of EE:

- i Development of regional labelling standards and label designs, including recommendations for minimum energy performance standards as well as other quality-related aspects for lighting, air conditioners and refrigerators
- ii Drafting of a labelling programme for those products, including a model guide for the development of national labelling schemes which were foreseen to be pilot tested in two countries.
- iii Development of a conformity assessment framework for EE to support the standards developed above, including the establishment of Regional Centres of Excellence in selected CARICOM member states. Existing capacities will be strengthened to provide the relevant testing and inspection services necessary to determine the EE, as well as the required metrology services for conformity assessment services.
- iv Increasing the consciousness of consumers, entrepreneurs, decision-makers and regulators for the importance of QI for EE.

The German Ministry for Economic Cooperation and Development (BMZ) is funding this project implemented by the National Metrology Institute of Germany (PTB) in the period 2016-2019. The total project budget amounts to 1,0 Mio. €.

## 2. Assessment of the project

The evaluation was conducted by two independent experts in March 2019 and covered all activities since the start of the project. A mission to the Caribbean took place between March 10 and 22, 2019. Due to time and budget constraints, the mission had to concentrate its travel to the Dominican Republic, Jamaica and Barbados. Main stakeholders in other countries have been either contacted via phone calls or were approached through questionnaires to gather as much information as possible from all project participants.

### 2.1 Status of the transformation process

#### Relevance

The need to improve the EE of domestic appliances and lighting products sold in the Caribbean is still existing. RE and EE are central pillars of the BMZ Strategy for Regional Cooperation with the Caribbean. But the topic RE has only been marginally addressed due to budget and time constraints. A missing quantified baseline makes it difficult to assess the impact and effect of project objectives in the long run.

The project goal is supported by regional and national policies, but there is a lack of legal frameworks in most jurisdictions, necessary for the mandatory implementation of EE standards and labels.

#### Effectiveness

Training activities, study tours and the input of international expertise have shown very positive effects. The outcome and output indicators are partly too ambitious and will not be fully achieved during the project time. But in some cases, targets have even been exceeded.

The formulation of the results matrix is incomplete, because it does not consider a robust conformity assessment system. International practices and relevant standards in this context have not been taken into account. The sources for verification of achievement are not overall well identified. The business strategy of NSBs is not sufficiently developed.

#### Impact

The awareness for harmonization of EE standards and labelling and complexity of introducing such scheme was raised. The institutional capacity and the mandate and positioning of both implementing partners has been strengthened, test centres and pilot countries were successfully selected and prepared.

The regional integration has been improved, but the participation of NSBs and regulatory authorities in smaller jurisdictions was weak. Some disconnect has been observed between NSBs and other relevant national agencies. Consumer awareness has not been addressed sufficiently so far.

#### Efficiency

Based on the number and quality of activities, financial resources have been reasonably managed. Meetings, workshops and trainings were organized with the least amount possible and made use of existing communication channels and processes facilitated by CROSQ and INDOCAL.

Resources for management of the project were used with high efficiency. The project made use of funding resources by other donors and efficiently developed cooperation with donors and other projects for creating numerous synergies. Expenditures in outcome 3 were not well allocated to the project objectives.

#### Sustainability

All capacity building and training activities will have a remaining effect and mark a step forward in comparison to the situation before the project start. The approval of harmonized standards within

CARICOM and the selection of regional testing laboratories demonstrate a significant progress and symbolize irreversible milestones towards an integrated QI and energy policy.

The project has further substantially contributed to an improved collaboration and exchange of information among NSBs and it strengthened the role of CROSQ among its member institutions, partners and within the CARICOM region as such. It has further created new connections to partner institutions outside of the region, which can be supportive in the future.

The sustainability of the project is to a high degree dependent on approval of the standards at the national level, the proper and commonly agreed implementation of procedural rules for testing and labelling, the solution of logistical issues with regard to sampling and testing and the signing of Mutual Recognition Agreements or other arrangements for the acceptance of tests by 3<sup>rd</sup> party laboratories. However, it will not be successful without further external support in the piloting phase. As a shortcoming, it needs to be noted that the project has not sufficiently covered the issue of costs, cost recovery and the need for additional human and hardware resources for testing and inspection.

## 2.2 Success factors for the observed impacts and transformation processes

### Strategy

The project follows a clear strategy jointly developed by PTB and the two partners CROSQ and INDOCAL, partly based on: a) previous subregional standardisation efforts within the Organisation of Eastern Caribbean States, b) experiences of individual countries with the establishment of own standards and testing capacities, and c) an on-site appraisal mission that helped to define partners, formulate the core problem, and to determine common objectives and target groups. Some smaller NSBs and most regulating authorities have only been in loose contact with the project management team or have not been involved in any strategic decision making. All project partners have demonstrated flexibility by revising and adjusting the outcome indicators according to the findings and consultant recommendations made within the course of the project implementation.

The project has underestimated the importance of support and backing from the political side (national ministries). This can partly be explained by the focus and role of CROSQ which, by default, is not directly dealing with political issues, such as the implementation of technical regulations, and the relevant agencies (customs, inspection bodies, consumer affairs departments, etc.) for approving and implementing such rules.

The project could have performed better on the integration of consumer affairs institutions, customs authorities, inspection bodies, importers, retailers, and in particular the target group of this project: consumers and small and medium enterprises. Their active participation would have provided a first-hand and better understanding of their needs, roles, perceptions and conceptions.

### Cooperation

In numerous cases the collaboration between CROSQ and the NSBs is excellent and apparently built on mutual trust and solid relationships. NSBs were requested to articulate their capacity needs and were actively involved in key decisions.

While the essential role of CROSQ and INDOCAL for enabling regional cooperation and donor coordination is undisputed, the lack of information about the project and its achievements among various local actors, and the low visibility of the project outside of the “QI community” is apparent in the countries visited during the evaluation.

The CARICOM Energy Unit as core partner within the Project Advisory Committee (PAC) should have played a more prominent role by advertising the importance of harmonized standards and labels among the corresponding authorities at the national level. The project should have involved considerably more

the import and retail sector as well as consumer protection agencies who are all directly affected by the project results and highly relevant for the final success of the project objectives.

The Implementation Agreement, signed by PTB, CROSQ and INDOCAL defines the roles and obligations of each partner and has facilitated the cooperation and coordination at regional level. But INDOCAL's role within the project has only been vaguely defined and remains somewhat unclear.

### Steering structure

Due to the geographical distance between the team members, the Project Management Team held regular virtual meetings every 2-4 weeks, which secured a reasonable level of communication and information exchange for steering the project on a timely basis. CROSQ as well as INDOCAL have taken over coordination and management functions at the regional and local level. It has been noted by both partners that an environment of trust had been built among them, despite all difficulties encountered on the operational level. The continuous exchange of information between PTB and the implementing partners allowed for a smooth and well-coordinated project management without major complications.

The creation of the PAC has generally been positive for guiding the project. A stronger integration of the Dominican Republic could have been achieved by the incorporation of a representative from the government or a regulatory authority as additional member of the PAC. Furthermore, it would have been advisable to invite persons with a larger know-how of the standards and labelling process and consumer and business perspective.

Project planning seems to have been conducted in a structured manner, according to the defined impact matrix. Planning for the final months of the project in 2019 and beyond the project termination has been done in a simplified manner. However, it remained unclear for the evaluators how decisions were taken and on which level decision making took place.

### Processes

The project has effectively used established processes among CROSQ member states for the elaboration of standards and has positively contributed to the integration and harmonization of QI activities in the region. The intensive and very focussed capacity building of and direct consultancies to the NSBs' staff as well as to the Technical Officers of CROSQ played a vital role for achieving the project objectives and has shown very positive effects. The exchange of information and the learning processes in cooperation with foreign institutions (outside of the Caribbean) was relatively new and extremely helpful for many project participants. A selected number of NSBs is now sufficiently enabled to contribute to energy-related QI measures and procedures and can handle either testing activities or participate in the label piloting phase.

Relatively new for CROSQ is the engagement in awareness, communication and information activities. Processes in this regard have been started but could not yet unfold their full potential and have not received sufficient support by the project.

### Learning and innovation

The steering of the project demonstrated sufficient flexibility in reaction to learning processes which developed during the project execution and had not been foreseen at the planning stage. In turn, the PAC lacks people who could have provided know-how in standards and labeling activities and given additional input for decision making. But overall, the establishment of the PAC has been very positive, allowing for a close coordination and exchange of information among different players and donors in the region and providing a strong backing for the project.

In general, the learning processes have been sufficiently documented. To what extent the documents addressing learning processes have been made available to all staff members of the partner institutions

and beyond this inner circle to other project participants could not be assessed. A common platform for document sharing with partners outside of the PMT is not in place.

The selection of conformity assessment processes has not fully considered the conceptual framework provided by the standards of the Committee on Conformity Assessment (CASCO) of the International Standardization Organization (ISO) for strengthening the labeling process, which could have facilitated taking advantage of existing know-how contained in those standards.

### **3. Learning processes and learning experience**

Regional projects with countries of different cultural and political backgrounds are difficult to implement but offer huge opportunities for knowledge sharing. This holds particularly true if the countries are not homogenous, but at different stages of development as in the case of CARICOM member states and the Dominican Republic, due to different markets, population sizes, political strategies and priorities, infrastructure and other influencing factors. The decision motivated by the project to concentrate efforts on using existing testing facilities in just two of the 15 CARICOM states has been a great step forward in overcoming national individual interests and leading to political and market integration within the region.

### **4. Recommendations**

The evaluators recommend that a better and more frequent communication with key stakeholders outside the PAC would be helpful to avoid overlaps with national activities, as in the case of Jamaica. Public consultations on all label issues need to be carried out effectively to reflect well cultural perceptions and the degree of knowledge and understanding among consumers. A long-term and regular monitoring of the standards and labelling process will be essential for measuring the effect of the project interventions and making adjustments in the implementation phase where necessary.

Overall, the budget and timeline for this kind of project was very limited, making prioritization necessary and not allowing for all activities to unfold as planned. A stronger presence of PTB and more support by external expertise would have been an advantage but could not be realized due to financial restrictions.