

EXTERNAL EVALUATION - SHORT REPORT

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“Establishment of a fit-for-future National Metrology Institute in Ghana”

Country | Region: Ghana, Africa

Project number: 2018.2021.6
Project term: 08/2020 to 07/2024 (after cost-neutral extension)

Lead executing agency: National Metrology Institute of Germany (Physikalisch-Technische Bundesanstalt, PTB)

Executing agency: Ghana Standards Authority (GSA)

PTB | Section: Group 9.3
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Date: 10.06.2024

This evaluation is an independent assessment. Its contents reflect the evaluator's opinion which is not necessarily equivalent to PTB's view.

List of abbreviations



BMZ	Federal Ministry for Economic Cooperation and Development
CD	Capacity Development
cW	capacity WORKS
DC	Development Cooperation
ECOWAS	Economic Community of West African States
FC	Financial Cooperation
GSA	Ghana Standards Authority
GhAS	Ghana Accreditation System
GIZ	German Agency for International Cooperation
KfW	German Development Bank
MoTI	Ministry of Trade and Industry
NMI	National Metrology Institute
NQP	National Quality Policy
OECD-DAC	Organization for Economic Cooperation and Development - Development Assistance Committee
SDG	Sustainable Development Goal
SWOT	Strengths, Weaknesses, Opportunities and Threats
TC	Technical Cooperation

1. Executive summary of the project

The **bilateral cooperation project** “Establishment of a fit-for-future National Metrology Institute in Ghana” has been implemented by the National Metrology Institute of Germany (*Physikalisch-Technische Bundesanstalt*, PTB) in cooperation with the Ghana Standards Authority (GSA). The project has been **commissioned by** the Federal Ministry for Economic Cooperation and Development (*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung*, BMZ) in the frame of the Development Cooperation Program “Training and sustainable growth for decent jobs in Ghana”. The **duration** is 4 years (08/2020 - 07/2024) with a **budget** of 2.000.000 EUR.

Political partner is the Ministry of Trade and Industry (MoTI) and **implementing partner** is the Ghana Standards Authority (GSA). The **target group** of the project are Ghanaian and West African companies of different sectors, research and scientific institutions, employees of the metrology department of GSA, which is currently acting as National Metrology Institute (NMI) as well as (indirectly) consumers of local and regional products.

The **module objective** is: The National Metrology Institute (NMI) in Ghana provides relevant services to industry, science, and consumer protection.

The cooperation with GSA has been organised in the following 3 Outputs:

Output 1 “Preparation of a needs analysis for metrological services”, which aims to detect the relevant needs for metrological services in the country. The impact hypothesis states that relevant services can be offered by the NMI via a demand-oriented development of national standards and the traceability of the measurement results.

Output 2 “Strengthening the metrological capacities of the NMI”, which targets that the new metrological services offered at NMI level will be traceable to national standards and the results will be internationally recognised. The impact hypothesis states that Ghanaian and regional companies will get a better access to internationally recognised metrological services via the NMI and improve the investment climate.

Output 3 “Development of sustainable financial models and timetables“, which aims at the development of a business plan with possible scenarios for financing investments as well as operation and maintenance costs and the required time frame for the NMI development. The impact hypothesis states that the implementation of a sound and realistic business plan will enable a sustainable development of relevant services by the NMI.

2. Evaluation of the project

The evaluation has been conducted in accordance with the standards of the German Association for Evaluation (*Gesellschaft für Evaluation*, DeGEval) and focused on the criteria of the Organization for Economic Cooperation and Development - Development Assistance Committee (OECD-DAC) relevance, coherence, effectiveness, efficiency, higher level development results (impact) and sustainability. The assessment of the capacity WORKS success factors strategy, cooperation, steering structure, processes, and learning & innovation has been integrated in the evaluation of the criteria effectiveness. Furthermore, the 5 key principles (1. the evaluation empowers Africans, 2. the evaluation is technically robust, 3. the evaluation is ethically sound, 4. the evaluation is rooted in Africa, yet draws from across the world and 5. the evaluation shows the connectedness of the world, with special attention to where humanity’s footprint calls for new ideas and knowledge for change and transformation) of the “African Evaluation Guidelines” (African Evaluation Association, 2021) have been observed by the evaluation team throughout the evaluation process.

The objectives of this evaluation are twofold: (1) to comply with the rules of PTB to evaluate projects during their duration to assure accountability towards the BMZ and the Ghanaian cooperation partners as well as (2) to contribute to PTB’s institutional learning.

The evaluation design considered the triangulation of data and methods. Information and data on the project implementation and results have been collected and assessed as follows:

(1) Review and analysis of project-related documents, as e. g. project proposal with annexes to BMZ, SWOT analysis, stakeholder map, operational plan with financial monitoring, Technical Cooperation (TC) project and Development Cooperation (DC) program progress reports, expert reports, partner documents, as policies, strategies, studies, sector analysis etc. The information in these documents has been assessed with respect to consistency and cross-checked in discussions with the project team, partners, and external experts.

(2) Structured interviews with the project team, partners and stakeholders on their perception of the project implementation, results and challenges encountered as well as potential future opportunities. Due to the limited number of interviewees in Ghana, the evaluation mission has been carried out in a virtual mode. In a first round of interviews, the project outcomes and results have been discussed first with the complete project team and then again with all team members individually. The interviews/ discussions with partners and other relevant stakeholders have been organised by the project team and carried out based on the guiding questions developed beforehand on the OECD-DAC criteria, including the capacity WORKS (cW) success factors and the specific evaluation questions:

- Was the project frame too narrow and could there have been a bigger impact on GSA/ quality infrastructure in the country with a broader perspective (inclusion of different stakeholders within & outside GSA)?
- How did the difficult situation in the GSA Management influence the project implementation and how can the dependency be decreased?

The lack of physical/ on-site visits especially to the partner laboratories was addressed by obtaining and assessing photos and videos of the GSA locations, particularly the laboratories in Accra.

(3) The evaluation findings have been presented to and discussed with partners and other stakeholders in the frame of a virtual validation workshop on April 19th, 2024.

The six OECD/DAC criteria were used as an evaluation basis for this evaluation:

- Relevance: Is the project doing the right things?
- Coherence: How well does the project fit?
- Effectiveness: Is the project achieving its objectives?
- Impact (higher-level development results): What difference does the project make?
- Efficiency: How well are resources being used?
- Sustainability: Will the results last?

The following marking scale was used for the evaluation:

1	2	3	4	5	6
very successful	successful	successful to a limited extent	rather unsuccessful	mainly unsuccessful	entirely unsuccessful

Overall, the project received the mark: **1.9**

Relevance

The intervention was found to be geared very well to Ghanaian, BMZ and global policies and priorities, catering to the needs of the beneficiaries with an overall appropriate design and resilience to posed risks.

Overall, the criterion received the mark: 1.7

Coherence

The PTB module is very well imbedded in the DC program with relevant synergies to other modules and aligns well with regional PTB projects.

Overall, the criterion received the mark: 1.5

Effectiveness

The intervention has only partially achieved its objectives based on the defined indicators. The capacity development measures have been judged very useful to the participants and the capacity Works approaches have been well observed and implemented.

Overall, the criterion received the mark: 2.5

Efficiency

The resources have been used reasonably with respect to the outputs delivered (production efficiency) and the objectives achieved (allocation efficiency).

Overall, the criterion received the mark: 2

Impact (higher-level development results)

Although higher-level development changes can only be achieved over long impact chains, the project can contribute indirectly to improve social, economic, and environmental impacts.

Overall, the criterion received the mark: 2.5

Sustainability

The existing capacities of GSA on all levels present a sound base for developing them further and the needs-based implementation of the project was suited to strengthen GSA in a sustainable way.

Overall, the criterion received the mark: 1.3

3. Learning processes and experiences

The strategic approach to support GSA and its metrology department an already established key player in Ghana and the ECOWAS region to further develop towards a “fit-for-future” NMI, has proven successful. To support an institution, which provides a sound basis of technical staff/ metrology experts who are already experienced and highly motivated to deepen their metrology knowledge further and to extend their competences to new quality infrastructure service, is a very sustainable approach. The fostered structured knowledge and experience exchange as well as international networking with other NMIs is suited to strengthen GSA in performing its leading role for metrology in the region in a sustainable way.

The shift to virtual formats for capacity development and trainings was successful, as the project activities could be implemented despite the travel restrictions due to the COVID pandemic. Although these remote formats have their limitations and can't replace face-to-face/ on-the-job trainings completely. A hybrid approach is considered as cost-efficient and seems promising for the future.

4. Recommendations

Recommendations to the partners:

- Determine a well-defined timeframe for launching the construction project of the new E2 mass laboratory
- Consider the Ghanaian accreditation body (with its new structure “GhAS”) as a key partner and ensure a closer corporate relationship with GSA
- Continue strengthening GSA capacities to provide satisfactory traceability to secondary labs
- Support the NMI in playing a more important role in the region by establishing/ improving formal channels to promote GSA calibration services
- Strengthen internal knowledge transfer within GSA further
- Continue sharing the knowledge on metrology with other external beneficiaries (governmental and/ or private institutions)

Recommendations to the project team:

- Continue close cooperation with GSA as the main implementing partner
- Continue regular physical visits of PTB staff and external international experts to Ghana until a formal recognition of GSA competency (granted by third parties) to deliver suitable calibration services for the new parameters
- Hold-on to the bi-weekly working group meetings
- Continue communication and cooperation with the other TC and FC modules in the common DC program as well as with the regional PTB projects and other donors active in the sector
- Perform an evaluation of the equipment installed and check if the new calibration services are offered by GSA to customers
- Consider more realistic deadlines regarding the procurement process, taking into consideration the complexity of PTB administrative procedures and customs clearance from the Ghana side
- Define smarter/ better measurable indicators

Recommendations to the International Cooperation Department (9.3):

- When planning and preparing technical cooperation projects, continue to focus on PTB's special and unique strengths as the German NMI, which can deliver technical advice and support on an international level for increasing effectiveness, efficiency, and learning & innovation, which other German executing agencies aren't able to (“Unique Selling Point”)
- Ensure that project indicators are SMART (Specific, Measurable, Appropriate, Realistic and Time-bound) for better measuring of project objective achievements (over your internal quality control system), which has been a shortcoming of the current project

Recommendations to the evaluation unit of Working Group 9.01:

During drafting the report, the evaluation team has identified some interfaces and perceived overlaps in the requested assessment of the OECD-DAC criteria and capacity WORKS success factors, leading to the following recommendations for streamlining the report format:

- Keep the approach to work with an evaluation team consisting of a lead assessor, experienced in evaluation processes, being responsible for drafting the requested reports and a technical assessor with a metrology background for contributing specific sector expertise and experience,
- Consider simplification as well as reduction and contraction respectively of the dimensions to be assessed for the OECD-DAC criteria, especially for relevance, effectiveness, sustainability, and impact, where the interfaces between the different dimensions are not always clear and obvious,
- Give suggestions on how to evaluate the criterion 'impact (higher development changes)' in the case of small projects focused on technical advice of intermediaries.