

# External Evaluation

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Strengthening of Metrology for the improvement of the Competitiveness in the Egyptian Economy

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

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List of Abbreviations

|                 |  |
|-----------------|--|
| <b>AB</b>       | Advisory Board   |
| <b>AIP</b>      | Agricultural Innovation Project  |
| <b>AfCFTA</b>   | African Continental Free Trade Area  |
| <b>BIPM</b>     | Bureau International des Poids et Mesures  |
| <b>BMZ</b>      | <i>Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung</i>              |
| <b>CAPMAS</b>   | Central Agency for Public Mobilisation and Statistics                                    |
| <b>CD</b>       | Capacity Development   |
| <b>CMCs</b>     | Calibration and Measurement Capabilities   |
| <b>COMESA</b>   | Common Market for Eastern and Southern Africa  |
| <b>CRMs</b>     | Certified Reference Materials  |
| <b>CW</b>       | Capacity WORKS   |
| <b>DAC</b>      | Development Assistance Committee   |
| <b>DC</b>       | Development Cooperation  |
| <b>EGAC</b>     | Egyptian Accreditation Council   |
| <b>EU</b>       | European Union   |
| <b>FAO</b>      | Food and Agriculture Organisation  |
| <b>GIZ</b>      | <i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i>                           |
| <b>HCD</b>      | Human Capacity Development   |
| <b>ISO/IEC</b>  | International Organisation for Standardisation/International Electrotechnical Commission |
| <b>LNOB</b>     | Leave No One Behind  |
| <b>M&amp;E</b>  | Monitoring and Evaluation  |
| <b>MENA</b>     | Middle East and North Africa   |
| <b>MoHESR</b>   | Ministry of Higher Education and Scientific Research                                     |
| <b>MSMEs</b>    | Micro, Small and Medium Enterprises  |
| <b>MoU</b>      | Memorandum of Understanding  |
| <b>NIS</b>      | National Institute of Standards  |
| <b>NFSA</b>     | National Food Safety Authority   |
| <b>OECD/DAC</b> | Organisation for Economic Cooperation and Development/Development Assistance Committee   |

|              |  |
|--------------|--|
| <b>OP</b>    | Operational Plan   |
| <b>PSI</b>   | Private Sector Promotion and Innovation                                |
| <b>PT</b>    | Proficiency Testing  |
| <b>PTB</b>   | <i>Physikalisch-Technische Bundesanstalt</i>                           |
| <b>QI</b>    | Quality Infrastructure   |
| <b>QCAP</b>  | Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food |
| <b>RBM</b>   | Results-based Monitoring   |
| <b>RDT</b>   | Rapid Diagnostic Tool  |
| <b>RMP</b>   | Reference Material Producer  |
| <b>SDG</b>   | Sustainable Development Goal   |
| <b>SDS</b>   | Sustainable Development Strategy                                       |
| <b>SMEs</b>  | Small and Medium Enterprises   |
| <b>SMIC</b>  | Strengthening of Metrology for the Improvement of Competitiveness      |
| <b>TAIB</b>  | Transforming the Inspection and Assessment of Food Business in Egypt   |
| <b>TC</b>    | Technical Cooperation  |
| <b>TG</b>    | Target Group(s)  |
| <b>ToR</b>   | Terms of Reference   |
| <b>USAID</b> | United States Agency for International Development                     |

## 1. Summary

This report is the **outcome** of the final evaluation of the PTB project “Strengthening of Metrology for the Improvement of Competitiveness in the Egyptian Economy” (SMIC), funded by the German Federal Ministry for Economic Cooperation and Development (*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, BMZ*). The initial implementation period of the 1.000.000 EURO project was from May 2022 until the end of April, 2025. In March 2025, following finalising the evaluation mission, the project was extended without additional funds for another four months, until the end of August, 2025. The project’s purpose is that the Egyptian National Institute of Standards (NIS) offers additional metrological services to its customers in the food processing sector.

The evaluation **aimed** at assessing independently and systematically the overall achievement of the project, contributing to transparency and accountability towards the BMZ, Egyptian partner organisations and the general public. Results of the evaluation contribute to learning on institutional and strategic levels, guiding actions in the follow-up phase.

The evaluator **utilised participatory research methodologies**, incorporating a desk review, observations, a seven-days data collection mission to Egypt, semi-structured (virtual) individual and group interviews and an assessment workshop with key partners and stakeholders.

### Assessment according to the OECD DAC criteria

| Criterion                | Evaluation of the criterion |
|--------------------------|-----------------------------|
| 1. Relevance             | 2.8                         |
| 2. Coherence             | 3.0                         |
| 3. Effectiveness         | 3.3                         |
| 4. Efficiency            | 2.5                         |
| 5. Impact                | 3.5                         |
| 6. Sustainability        | 3.3                         |
| <b>Global assessment</b> | <b>3.1</b>                  |

- Since effectiveness, impact or sustainability were rated “4” or worse, the global assessment is downgraded to “4” although the mean would actually be better than “4”.
- No downgrading of the global assessment.

|                       |   |
|-----------------------|---|
| <p>Relevance</p>      | <p>The project is relevant and in line with Egyptian and German priorities, international practices and the needs of beneficiaries and stakeholders. The project's added value gained more relevance during the implementation period. The project's design is plausible and coherent, but not realistically geared towards achieving the intervention's objectives or indicators in the current phase.</p> <p>Mark: Successful to a limited extent (2.8).</p>  |
| <p>Coherence</p>      | <p>The project was designed in a complementary manner with other German projects, but collaboration opportunities turned out to be less than initially foreseen, not just with other German projects but also with other existing donors. Potential synergies were mindfully explored but not leveraged, due to the fact that the project's focus and target group are different and unique. The project was steered, implemented and monitored in a participatory way. It did not use common existing monitoring or learning systems of neither the partners nor donors.</p> <p>Mark: Successful to a limited extent (3.0).</p>                            |
| <p>Effectiveness</p>  | <p>The project is not expected to achieve its objectives by the end of the phase. The project successfully carried out some important Capacity Development activities. Some internal factors affected implementation quality negatively. No unintended negative results occurred or are foreseen as a consequence of the intervention.</p> <p>Mark: Successful to a limited extent (3.3).</p>   |
| <p>Efficiency</p>     | <p>The project's use of resources is deemed partially reasonable regarding its outputs and outcomes achieved. Due to the late start of project activities, conducting a second appraisal mission phase and delays with custom clearance processes, less activities could be carried out than originally planned. Neither could the achieved outputs be delivered using fewer financial resources, nor would a different use of financial resources increase project results.</p> <p>Mark: Successful to a limited extent (2.5).</p>   |
| <p>Impact</p>         | <p>Higher-level development changes are not expected to take place by end of the phase. Project activities plausibly contributed to some intended higher-level changes only. It did not, however contribute to any unintended negative or positive results at the level of beneficiaries or stakeholders.</p> <p>Mark: Rather unsuccessful (3.5).</p>   |
| <p>Sustainability</p> | <p>The project planted the seeds required to achieve objective in the next phase, by establishing and supporting right structures. There was general agreement that NIS has good facilities, enough manpower, mandate and willingness to learn and also sustain the positive results of the project over time. Financial resources might represent a challenge. More efforts have to be exerted in the following phase to achieve and sustain positive results, increase the technical expertise and resilience of NIS and stakeholders, and expand the inclusion of private sector in the dialogue.</p> <p>Mark: Successful to a limited extent (3.3).</p> |

## 2. Introduction

|                          |  |
|--------------------------|--|
| <b>Project title</b>     | <b>Strengthening of Metrology for the Improvement of Competitiveness in the Egyptian Economy (SMIC) in Egypt</b>                                 |
| <b>Programme</b>         | <b>Private sector development</b>  |
| <b>Project objective</b> | <b>The Egyptian National Institute of Standards (NIS) offers additional metrological services to its customers in the food processing sector</b> |
| <b>Term</b>              | <b>05.2022 - 04.2025, extended – 08.2025</b>   |
| <b>Volume</b>            | <b>EUR 1.000.000</b>   |
| <b>Evaluation period</b> | <b>05.2022 - 04.2025</b>   |

The **objective of the evaluation** is to assess the performance of the project “Strengthening of Metrology for the Improvement of Competitiveness in the Egyptian Economy” (SMIC), covering its activities since its start in May 2022 until the end of phase, planned by end of April, 2025. In March 2025, after the implementation of the evaluation, the project got extended without additional costs for another four months, until end August 2025. The project is integrated in the German Development Cooperation (DC) programme “Private Sector Development”. The Technical Cooperation (TC) module is the smallest project in this programme, with a budget of 1.000.000 EUR and an implementation period of three years. It is financed by Federal Ministry for Economic Cooperation and Development (*Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung*, (BMZ)). The evaluation was conducted towards the end of the intended implementation term of the project, during the middle of January 2025. Hence, it is to be considered a final evaluation.

The **results of this evaluation** serve accountability, monitoring and learning purposes, contributing to accountability towards BMZ and the Egyptian cooperation partners. The evaluation guides actions to maximise the project’s learning during the remaining implementation period and the planned follow-up project. Finally, the results of this evaluation will contribute towards learning on the institutional and strategic levels of PTB, in Egypt and the wider development community.

The **main users** of this evaluation are project team members, main implementing partners and stakeholders, PTB in general, Q.3 PTB International Cooperation Unit, specifically the BMZ department, and, most importantly, the public of both Egypt and Germany.

The project is **assessed based** on standardised 6 OECD DAC criteria and their sub-dimensions to ensure comparability between projects.

The assessment of the capacity WORKS (CW) success factors - strategy, cooperation, steering, processes, and learning and innovation - was integrated in the evaluation of the criterion of effectiveness.

In addition, the evaluation covers **two specific questions**, which were identified by *Physikalisch-Technische Bundesanstalt* (PTB) project team:

1. What challenges is the project facing in further integrating the private sector, especially in the networking component?
2. What challenges is the project facing in relation to data acquisition (e.g. Rapid Diagnostic)?

The evaluation **was carried out** by three evaluation team members. Ms. Salma Sabri is the team leader and responsible for the overall coordination and implementation of the evaluation. Dr. Christine Froese is the technical evaluator, providing technical input. To share experience, learning and lessons learnt between regional sections, Mr. Thomas Bollwein, project coordinator working in the regional section Q.33, Latin America and the Caribbean, also contributed to this evaluation throughout its phases.

It was agreed during the kick-off meeting with the PTB evaluation unit that both the evaluation and appraisal missions will be conducted in January 2025, with **partially overlapping data collection phases**. This ensured the maximisation of learning benefits and rationalisation of resources, while avoiding overburdening the partners with a lengthy data collection phase. The evaluation comprised a seven-days data collection mission to Egypt between January 11th - 20th, 2025. All evaluation team members took part in the field mission in Cairo, the virtual/in-person interviews <sup>1</sup>, and the assessment workshop.

### 3. Framework conditions and strategic approach of the project

#### 3.1. Framework conditions

Egypt is the most populated country in the Middle East and North Africa (MENA) region, with a population growth rate of 1.66% in 2021<sup>1</sup> and over 104 million inhabitants, over half of which is under the age of 30. Egypt has seen impressive economic gains and improvements to the average per capita income.

However, the economic situation has deteriorated, especially in the last four years. The currency devaluations since 2016, increases in fuel prices, the Russian aggression against Ukraine and Egypt's high dependence on imports have led to persistently high consumer prices and inflation of 33% (05/2023 CAPMAS). The prolonged economic spiral led to a shortage of foreign currency, with net international reserves plunging by 19% during the summer of 2022. The private sector is one of the main sectors affected by this crisis, as it relies heavily on foreign currency in managing and expanding its business.

**Agriculture** is Egypt's most important economic sector in terms of employment and contribution to gross domestic product. With a rapidly growing population, there are productivity and modernisation pressures on agriculture –especially for Small and Medium Enterprises (SMEs)<sup>2</sup> to cope with the continuous increase in population and act as one of the main contributing sectors to economic development based on the 1<sup>st</sup> pillar of the [Egypt Vision 2030 development strategy](#). Processed agricultural products, for instance, must meet quality and standardisation guidelines (e.g. regarding food safety) of global markets for SMEs to sell their products. The availability and application of metrological services adapted to the needs of the agricultural food processing sector will strengthen the products' quality and thus their competitiveness.

During the period of 2015 to 2017, the legal framework of the metrology system was updated and aligned with internationally applicable standards. The tasks shared between the state's QI institutions, NIS, the Egyptian Organisation for Standardisation and Quality (EOS), and the Egyptian Accreditation Council (EGAC) were clarified. Between 2017 and 2021, NIS' capacities were further developed in the field of metrology in chemistry (pH measurement) and in the transfer of expertise to neighbouring countries.

Despite these efforts, there still is a mismatch between national QI service providers and SMEs in the food processing sector in Egypt. The number of metrology services requested and utilised by Egyptian

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<sup>1</sup> <https://datacommons.org/place/country/EGY?mprop=count&popt=Person&hl=en#>

<sup>2</sup> Over 90% of land is run by SMEs according to project offer.

SMEs in the food processing sector is reduced by the fact that the NIS itself produces a limited and insufficient number of metrological services that meet the needs of SMEs in the food processing sector (**core problem**). In addition, the majority of SMEs, are neither familiar nor updated with the services offered by NIS, nor added value in complying with existing guidelines. As a result, SMEs purchase certified reference material (CRMs)<sup>3</sup> from abroad at very high costs to perform appropriate calibrations, and do not actively demand NIS' services. Poor quality of products from the food processing sector impacts the competitiveness of SMEs negatively in national and international markets, leaving idle potentials in terms of opportunities and export prospective.

### 3.2. Strategic approach of the intervention

The project's **political and implementing partner** is the Egyptian National Institute of Standards (NIS). Its target group is the employees of the NIS. The indirectly involved actors are other QI service providers (including National Food Safety Authority (NFSA) and secondary testing and calibration laboratories, authorities and chambers, partly of SMEs, from the food processing sector. Consumers of processed food products are the **final beneficiaries**.

The TC module supports the development of new QI demand-based services at NIS and enables SMEs in the food processing sector, as well as testing and calibration laboratories, to better utilise them. The module's **objective** is that NIS offers additional metrological services to its customers in the food processing sector. For this purpose, the technical capacities of NIS are being strengthened to establish and provide additional services as a first step. As a second step, absorption capacities and awareness on the part of the QI and the food sector should be strengthened. **Three outcome indicators** were formulated to measure the objective's achievement, namely:

1. 25 test laboratories from the food processing sector took part in the comparative measurements offered by the NIS.
2. NIS offers its customers a new reference measurement method in food analysis.
3. NIS offers 4 new comparative measurements in the field of food analysis, accredited according to international standards (ISO/IEC 17043:2023).

This **methodical approach** is based on a combination of system-related and technical advisory and training measures, which are delivered in the scope of the following three outputs:

**Output 1** aims to improve cooperation, exchange, and awareness-raising between the NIS and its customers from the food processing sector. Both actors are neither sufficiently aware of the current needs of the food processing sector nor of the services QI can offer to meet the demand. A regular structural exchange process between the QI and the food sector will strengthen communication between the actors and raise mutual awareness. The **impact hypothesis** states that the improvement of cooperation and the strengthening of the technical competences of the QI service providers will lead to

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<sup>3</sup> A Certified Reference Material (CRM) is a reference material characterised by a metrologically valid procedure for one or more specified properties, accompanied by a reference material certificate that provides the value of the specified property, its associated uncertainty, and a statement of metrological traceability [ISO Guide 30:2015, 2.1.2].

an adaptation and improvement in the range of services offered by the NIS for customers from the food processing sector (SMEs) through offering additional metrological services (module objective).

**Output 2** focuses on strengthening the technical expertise of NIS through the production and certification of CRMs for the food processing sector. This will contribute to the **impact hypothesis** that NIS will produce significantly more CRMs for the food sector, and thus improve the range of services for customers from the food processing sector (module objective).

**Output 3** aims to improve the competences of the NIS as a service provider for carrying out comparative measurements for food analysis. NIS already offers this service, but only in thematically different areas. The **impact hypothesis** is that the competences of the NIS are improved by new comparative measurements as service providers in food analysis. The demand for metrological services from SMEs in the food sector is met through qualitative improvements and international recognition of the measurement results (module objective). (Please see the updated results model in Annex I).

For measuring the achievement of the three outputs, two indicators have been formulated for each output (a total of 6 output indicators).

**Instruments** applied for the interventions are mainly two long-term international experts supported by one national local expert, short-term experts, capacity development measures, and procurement of technical equipment and consumables.

The **module logic** follows a holistic multi-level strategy, in which capacity development activities are directed at three levels to address the core problem identified: individual, organisation, and network levels. Finally, the formulated impact logic and project strategy are coherent, logical, and plausible. The three outputs are logically related to the project objective and contribute to its achievement.

## 4. Evaluation methodology

### 4.1. Evaluation design

The main elements of the **evaluation approach** are being participatory, evidence-based, independent with an absence of conflicts of interest, as well as being utility-focused. Data was collected/triangulated through the following **data collection methods**:

#### *Desk Review and Documents Analysis*

The main advantage of desk review is that it offered a good source of background information of the activities that have already been conducted. (Please see Annex II for a detailed list of reviewed documents).

#### *Semi-Structured (Virtual) Interviews*

The 6 OECD DAC criteria, along with CW success factors, were operationalised by a series of evaluation questions presented in the interview guideline in Annex III and used for the individual and group interviews. 15 semi-structured interviews were conducted to understand perceptions of project implementation, results, challenges encountered, as well as potential future opportunities, covered through the evaluation questions.

#### *Group Interviews/Focus Groups Discussions*

Group discussions were used to benefit from the collective stimulation, as one person's comment or answer triggers a chain reaction from the other participants, generating more views. Furthermore, an assessment workshop based on OECD DAC and CW criteria with 11 stakeholders, who are part of the Advisory Board (AB), was conducted during the evaluation mission to understand achievements and

challenges faced from stakeholders' point of view. (Please see Annex IV for assessment workshop's results).

#### *Direct Observation*

Direct structured and unstructured observation was used during the field visit. The team also visited NIS' "Organic and Proteins Analysis Laboratory" and the "Inorganic Analyses and Electrochemistry Laboratory" of the Chemical Metrology Division to understand NIS' general capacities in relation to food analysis, and its instruments with regard to the provision of planned CRMs production and Proficiency Testing (PT) in food analysis.

As for data analysis and validation, content analysis of documents and narrative notes from interviews were analysed to identify common trends and patterns, as well as to flag diverging views and opposing trends. To ensure the reliability and validation of results, a summary presentation of the preliminary evaluation findings and recommendations was discussed and validated with NIS leadership. A meeting with the appraisal team was also conducted.

#### *Strengths and Limitations of the Methodology*

**Strengths** of the evaluation methodology **outweigh its limitations**. The main strength of this evaluation is that its findings are based on triangulation from more than three data sources. Triangulation among data sources is particularly important, not only to enhance validity and reliability, but also to understand the effectiveness of the project from different perspectives.

Another strength is related to the methodology used in the assessment workshop with AB members, as it relied on qualitative and quantitative evaluation methods based on OECD DAC and CW criteria. As most indicators are not achieved, this methodology allowed unexpected results (blind spots) to be identified, creating space for open discussion, which could not be reflected in the monitoring system and its indicators.

Having the appraisal mission and the evaluation team run in parallel was an **added value** for both teams. Both teams met during their visit in Cairo to exchange ideas, lessons learnt and challenges, and feed into each other's reports and follow-up phase design, validating findings.

To avoid duplication of efforts, project partners and stakeholders were invited on the same day to two different workshops with each team independently on the same premises to save interviewees' time and efforts. As invitees received two separate invitations for interviews and workshops participation with distinctive objectives, led by two different teams with varied timings, confusion was created regarding the meetings' purposes and teams' roles. This limitation arising from the coordination between teams was the main **challenge** this evaluation faced. Still, the project and evaluation teams exerted additional efforts to overcome this limitation by calling interviewees on their phones and explaining both missions' objectives to ensure a high attendance rate.

#### **4.2. Data sources; data quality**

The **data sources** upon which this evaluation is based are project documents, data collected during field visits, as well as information collected through virtual interviews. All documents designated by the PTB Evaluation Unit were provided by project team—and in some cases even updated upon request—to meet the evaluation requirements. Financial monitoring data on the planned costs and real costs per output and cost were made available.

**Project management tools** were developed, regularly used by NIS and stakeholders and made available to the evaluation team. The PTB project team developed a comprehensive results-based

monitoring (RBM) system based on offer indicators. Baseline and target values were specified for all indicators, while risks, unintended results and activities were monitored. The quality of project steering and management instruments, such as the RBM system, steering structure, results model, stakeholder map is assessed as excellent. However, the Capacity Development (CD) Strategy is not assessed positively, as its content did not comprehensively address NIS' CD needs in relation to achieving Outputs 2 and 3. The project also lacked a clear training plan on how the CD strategy will be achieved.

The project team used the **CW self-assessment template**<sup>4</sup> to assess project implementation level based on 5 CW success factors, before the evaluation mission in November 2024. The same CW template was adapted and used in November 2024 with AB members as a participatory monitoring tool to assess the project implementation approach and level. The evaluation team assessed dimension 3 under 5.1.3, 'Effectiveness', based on triangulation and comparative analysis of all collected results.

The **sampling strategy** adopted for selecting potential interviewees ensured that the overall project components are represented fairly. The evaluation team reached out to approx. 50 persons via e-mail, and approx. 40 responded positively to the invitation. Individual and group meetings/workshop were conducted with 27 respondents, 14 out of which were females (52%). 11 stakeholders participated in the assessment workshop, out of which 4 were females (please see workshop's participants list in Annex V). The overall participation rate of females in interviews and assessment workshop is 47%. Respondents belonged to different professional groups and entities (e.g. PTB management and project team, public and private sector, German Embassy and GIZ projects). (Please see Annex V for interviewees' list). The high response rate made the **sample comprehensive**, encompassing representatives covering all project aspects.

## 5. Evaluation results

### 5.1. Status of the transformation process (OECD DAC)

#### Marking scale for the evaluation of the OECD DAC criteria

| Evaluation                     | Grade | Description  |
|--------------------------------|-------|--|
| Very successful                | 1     | Very good result, far above expectations   |
| Successful                     | 2     | Good result, entirely meets expectations   |
| Successful to a limited extent | 3     | Satisfactory; results are below expectations, but mainly positive                                    |
| Rather unsuccessful            | 4     | Unsatisfactory result; below expectations; negative results prevail despite several positive results |
| Mainly unsuccessful            | 5     | Negative results clearly prevail despite several partially positive results                          |
| Entirely unsuccessful          | 6     | The project has failed completely; situation has rather deteriorated                                 |

<sup>4</sup> EVA\_15\_CW Einschätzung.

### 5.1.1 Relevance

**Dimension 1: To what extent is the intervention's design geared to country-specific, regional, and global policies and priorities of the partners and the BMZ?**

**The project is geared well to the partners' policies and also integrated in the German DC programme, contributing to BMZ's 2018 country strategy for Egypt and international standards for food safety.**

Egypt is a development partner of **high strategic importance for the German DC**. BMZ's 2018 country strategy for Egypt –which is currently being revised— identified sustainable economic promotion as a priority for Egyptian German DC. Sustainable economic promotion, as a priority for German DC, is fostered using an integrated approach to employment promotion, vocational training and private sector promotion. In this regard, the German government promotes the development of a thriving private sector as a main driver for growth and job creation, encouraging state and non-state actors to engage in continuous dialogue, which **Output 1 of the module contributes to**. The TC module, implemented by the PTB, is part of the DC programme "Private Sector Development". The module also aligns with and contributes to the **guiding principles of international standards** for food safety, such as the EU-Egypt Association Agreement (2004) and the agreement on agricultural, processed agricultural and fisheries commenced in June 2010.

The module works closely at the national level with the **political and implementation partner NIS**, which is officially subordinate to the Ministry of Higher Education and Scientific Research (MoHESR). The project has **high priority for NIS**, as it enhances its staff's capacity in its core areas, while also adding value on institutional level.

The **module is in line** with the 2030 Agenda, which is reflected and operationalised via the Egyptian Sustainable Development Strategy (SDS): Vision 2030. It mainly contributes to the following **Egyptian strategies and pillars**:

- SDS strategy's pillars "economic development", "promotion of private sector competitiveness" and "knowledge, innovation and research".
- The Sustainable Agricultural Development Strategy of 2030, priorities agricultural development and promotes the expansion of accredited laboratories for Egyptian products to obtain the necessary certificates of conformity (Egypt Vision 2030, p. 43).
- The three main intervention areas "capacity development, research, and consultancy services" of the 2030 National Strategy of Science, Technology and Innovation of MoHESR. It mainly contributes to pillar two in the Strategy, "Knowledge production and Technology Transfer", which promotes the growth of NIS' Calibration and Measurement Capabilities (CMCs) production recognition based on NIS Decree 2021. The NIS Decree 2021 and the Metrology Law No. 203/2020 refer to the responsibility of NIS for the production of reference materials. The term reference materials is used with all chemical and food testing parameters.

**For PTB**, the project is part of PTB's regional activity in MENA and has significance for both institutes, as it is the first bilateral project in Egypt. NIS is a strong metrology partner in Africa, and PTB has a longstanding working relationship in scientific areas (e.g. training, researcher exchanges). A Memorandum of Understanding (MoU) between PTB and the NIS was signed on May 24<sup>th</sup>, 2024 covering beyond the project's scope, formalising the partnership on all levels and focusing on exchange and cooperation opportunities.

The **project's added value** is perceived by all interviewees as positive, as it links QI with the food processing sector aiming to increase agricultural productivity, and exports of processed food products

to the European Union (EU), and consequently increase foreign currency. It covers an unmet gap in the market. The relevance was confirmed by NIS based on an analysis of the causes of rejection of Egyptian food products by the EU due to high mycotoxins and pesticides levels which must be exactly tested by use of CRMs to avoid rejection of consignments.

To conclude, the **relevance of the project and the underlying causes** of the core problem did not change during the project's phase, but even **gained more relevance** with the worsening of the economic situation in Egypt, especially for SMEs.

## **Dimension 2: To what extent is the intervention's design geared to the needs and capacities of the target groups?**

**The project is aligned with the needs and capacities of the target groups and involved stakeholders, namely public QI institutions and SMEs, to a great extent.**

The **relevance** of the project activities to interviewees' needs and priorities was **ranked** by all interviewees **as high**. The selection of NIS as an implementing and political partner is adequate to avoid dealing with more administrative layers, which is needless for such a small project. NIS is among the few institutes in Africa with internationally recognised measurement and calibration capacities. Egypt's integration into the African Continental Free Trade Area (AfCFTA) and the Common Market for Eastern and Southern Africa (COMESA) offers potential for the food processing sector to open up further markets in the region and create long-term employment. For all involved stakeholders including the private sector, **CRMs are required** for method validation, quality assurance, equipment calibration, and eventually for ISO 17025 accreditation.

The project followed a **systematic examination of the target group, stakeholders and private sector core problem and needs**. With the start of project activities, the project initiated a second appraisal mission, after the first virtual appraisal mission, to validate results and identify actors along the value chain in a participatory manner. A detailed list of involved actors was submitted in the form of the actors' map, which marked the basis of AB composition. Consequently, a **capacity development matrix** including a SWOT (Strengths, Weaknesses, Opportunities, and Threats) **analysis** for NIS, governmental and private QI service providers, and potential clients was developed. Although this might have cost the project some time, it ensured that it started its activities with the right partners to achieve its overall objective. Finally, **disadvantaged and vulnerable groups** were not considered nor emphasised as a potential target group in the offer. There was no need for the project to focus on particular **disadvantaged groups**, due to the fact that QI services are designed in a way that they are available and used by secondary labs and not the population of the country

Training participants were asked to what extent was the **training content relevant, adequate, utilised, and fulfilled their expectations**. Findings indicate that the topics covered in the trainings were highly relevant and adequate to all participants' current responsibilities and affiliated organisations' mandates. **Critique**, however, was raised regarding the training of the ISO 17043 standard requirements, as its duration was considered too short, and the training was not practical or detailed enough (in relation to statistic and risk management). Although training on the ISO 17034 and ISO guide 35, in relation to component two, was part of the project's strategy and CD plan, NIS was trained on ISO guide 35 only. The CD strategy and training plan were not adapted to the new standards for Reference Materials (ISO 33400: 2024 including ISO 33405) which are replacing the former ISO guide 35.

**Dimension 3: To what extent is the intervention's design appropriately, realistically and plausibly geared towards achieving the intervention's objective?**

**The formulated theory of change is coherent and logical, and its three components are appropriate and well interlinked. However, the objectives of the project were overambitious for the planned timeframe.**

The interaction between the different levels of results is comprehensible, basing its logic on improved capacities (**Output 2**), competencies (**Output 3**) and coordination (**Output 1**). The three outputs are logically related to the project objective and contribute to its achievement. Supporting regular exchanges between the QI sector and the food sector raises mutual awareness, raising demand (**Output 1**), which is one of the prerequisites to achieving results on a network level. Strengthening the technical expertise of NIS (**Output 2**), improving its competencies as a service provider to offer comparative measurements (**Output 3**), and understanding the needs of QI sector through regular exchange (**Output 1**) will result in NIS adapting its services and offering additional demand-oriented services (**Objective**). The improved capacities on individual and organisational levels will strengthen the competitiveness of companies in the international context. Quality assurance is improved through the holistic approach, complementing the approaches of other TC modules in the DC programme. Ultimately, the general conditions and financing environment will allow private sector to grow and create jobs (**Impact**).

However, the **objectives** on outcome and output levels are ambitious, and most indicators cannot be achieved in the designated timeframe. **Indicators** defined on all levels to measure the achievement of the project objectives are formulated mostly in a SMART (Specific Measurable, Achievable, Realistic, Time-bound) way to allow proper measurement and comparison between baseline and target values. Although **baselines and targets** were defined for all indicators, some set targets are unrealistic, especially with regard to Outputs 2 and 3, which are too high to be achieved in the current phase (e.g. 40 new CRMs or new 4 accredited PT programmes). Furthermore, the baseline for three indicators proved to be incorrect during the lifespan of the project (e.g. Outcome Indicator 1, Output Indicators 1.2 and 2.1). Indicator 2.1 is not specific enough to understand in which area CRMs can be produced, while module Indicator 3.2 could have benefited from further specification of accredited proficiency testing programmes. As for **outcome indicators**, they were selected correctly to assess objective achievement and use, but again were assessed as too ambitious to be achieved by the end of the project phase, even with the extension in project phase.

As for **components' composition and appropriateness**, most interviewees agreed that the composition of components is correct, highlighting an **added value of this project** as it did not only focus on "pure technical aspects". The inclusion of **Output 1**, is immensely useful for two key reasons. First, Egyptian QI actors do not have a forum to discuss and exchange ideas and challenges in the food processing sector, increasing future demands. Second, it offers useful opportunities for dialogue and exchange of information, as the project is the first bilateral project with PTB in Egypt.

Inclusion of **Output 2** is very appropriate, as it directly contributes to enhancing NIS' core area of expertise and added value, based on an analysis of EU rejections of food export consignments from Egypt. The target value set as 40 new CRMs was too high for the planned timeframe.

**Output 3** was included based on NIS' strong interest in becoming an accredited PT provider in food testing. Nevertheless, NIS' request, and consequently the concept feasibility of Output 3, were neither well justified nor strategically examined based on a thorough gap analysis. There was no clear plan on how to adapt to food PT schemes and build upon their management system.

Based on the desk review and evaluation mission findings, the **main reason for shortcomings in the design** is the **virtual nature of the appraisal mission**. The appraisal team had to rely on information

on the status quo of capacities and facilities without sufficient validation, resulting in an overestimation of baseline situation, and unrealistic planning of project activities (e.g. high indicators' targets). NIS, as a known metrology institute, has many CMCs entries and was trusted to be competent, but the competence in food analysis, including sample preparation and equipping, could not be sufficiently assessed during the virtual appraisal mission (Output 2). As for Output 3, the appraisal mission could not validate NIS' capacities in achieving the Output by conducting a gap analysis, neither did it strategise a realistic and clear approach on how Output 3 will be achieved.

**Dimension 4: To what extent has the intervention's design responded to changes in the environment and adapted to the needs?**

**The design of the intervention has allowed the project team to adapt activities to the (changing) needs of partners and changes in environment and context. To some extent, the project responded positively to changes in the environment and adapted to needs.**

The project **responded adequately** to the virtual implementation of the appraisal mission and the poor quality of needs assessment through initiating a second appraisal mission, as mentioned under "Dimension 2". The actors identified in the virtual appraisal mission turned out to be partly inappropriate in terms of content and insufficient in terms of topics, especially with regard to the food processing sector. The new updated actors map formed the basis of Output 1 activities.

The project identified and monitored risks and unintended results continuously and **responded to delays, by changing its strategy in 2024**. The delays were caused by the repetition of needs analysis, reassessment of NIS' capacities to produce and certify CRMs by a PTB technical expert, and the late start of the procurement and purchase process. Since it was not expected that the project will be able to achieve Outputs 2 and 3 until the end of the project phase, all project partners agreed to focus on improving NIS' competence as a service provider on comparative measurements, not on the basis of the newly produced CRMs, but based on CRMs that are already available and purchased. This guaranteed the initiation of Output 3 activities, in parallel to the activities under Output 2 once equipment was purchased and installed.

While some interviewees praised the project for being **flexible and responsive**, response to some important requests by both cooperation partners was assessed **as slow**. For instance, the project should have prioritised purchasing the equipment by starting the procurement process in the first year, firstly, as it was planned as an item with a clear budget in the offer, and secondly, as most activities depend on its usage. However, the official request by NIS to procure equipment was only submitted and discussed in detail with the involvement of the PTB technical expert who joined the project in July 2023, although the equipment's importance for achieving project objectives is known to both partners. After finalizing the procurement process from PTB side, more efforts could have been exerted by NIS in clearing the equipment from customs and receiving the CRMs on the agreed upon delivery date.

**Summarised Evaluation**

| Criterion | Evaluation dimension  | Weighting | Appraisal |
|-----------|---|-----------|-----------|
| Relevance | The intervention's design is geared to country-specific, regional and global policies and priorities of the partners and the BMZ. | 25 %      | 2         |

|                                    |   |      |      |
|------------------------------------|---|------|------|
|                                    | The intervention's design is geared towards the needs and capacities of the target groups.                      | 25 % | 2    |
|                                    | The intervention's design is realistically and plausibly geared towards achieving the intervention's objective. | 25 % | 4    |
|                                    | The intervention's design has responded to changes in the environment and adapted to the needs.                 | 25 % | 3    |
| Global assessment of the relevance |   |      | 2.75 |

Overall, the relevance of the project is assessed as “successful to a limited extent” (2.8), due to its alignment with Egyptian and German priorities and the needs of beneficiaries and stakeholders. The project’s design is plausible but not realistically geared towards achieving the intervention’s objectives in the current phase. **Disadvantaged and vulnerable groups** were not emphasised as a potential target group in the offer.

### 5.1.2 Coherence

**Dimension 1: Internal coherence: Within German development cooperation, to what extent was the intervention designed and implemented in a complementary manner, based on a division of tasks?**

**Although the project was designed in a complementary manner with other German projects, it was not implemented in a complementary manner. This is due to the fact that the project focus, target group, implementation partners and stakeholders are different from other modules of the programme.**

The project is in line with **international and national norms and standards to which German DC** is committed (e.g. gender equality and inclusion, building peace and realising democracy, consistency with anti-corruption statutes and human rights conventions). It directly and indirectly contributes to the new „Feminist Development Policy” (BMZ, 2023) and quality criteria such as "Human Rights, Gender Equality and Inclusion" of BMZ. Gender equality and inclusion will be considered in project concept of the following phase.

Within German DC, the project was **designed in a complementary manner** based on division of labour. Interviewees confirmed that there are no official coordination mechanisms with other GIZ or *Kreditanstalt fuer Wiederaufbau* (KfW) modules to exchange information and progress on a systematic basis, with the exception of yearly contributions to programme reporting.

The project **reached out proactively to other GIZ and PTB** projects’ representatives to exchange information and identify cooperation opportunities. During informal meetings with the "Private Sector Promotion and Innovation" module (PSI, PN: 2018.2155.2), PTB was requested to visualise the food value chain process, to determine cooperation areas. However, the PSI side did not follow-up during the current project phase. PSI also exchanged its database of SMEs with SMIC, which proved beneficial during the mapping exercise for the networking component. No synergies were materialised with the TC module “Agricultural Innovation Project” (AIP, PN: 2016.2250.5) of GIZ aiming to modernise the agricultural and food sector as planned, as it was still in its orientation phase.

Interviewees, including other GIZ programme representatives, assessed the **exchange with other GIZ projects** that took place in this phase **as sufficient**. Meetings confirmed that no cooperation opportunities exist during the current phase, as the target groups, focus, partners and stakeholders of other GIZ and PTB projects are different. The **direct target groups** of the programme are Micro, Small and Medium Enterprises (MSMEs), especially employees and employers, jobseekers with no formal training in rural regions and urban centres, as well as underemployed people in the informal sector, particularly young people. Meanwhile, the SMIC project has a more technical focus and is more concerned with SMEs as final beneficiaries and laboratories as a direct target group. Still, interviewees, including other GIZ programme representatives, assessed the **exchange that took place in this phase as sufficient**.

As importantly, to improve cooperation between **the GIZ office in Cairo and PTB**, at least on logistical aspects, PTB team arranged for a mutual agreement where the GIZ-Egypt office would provide support with event logistics, corporate rates for hotels and venues, and local payment.

Internal cooperation **with PTB unit 3.21** “Bioorganic Mass Spectrometry” through the direct involvement of a technical expert was perceived by all interviewees, especially NIS but also by the evaluators, as highly beneficial. The technical expert could **bridge the technical language gap** between NIS’ technical team and PTB’s project management, accelerating procurement process, design and implementation of CD measures.

**Dimension 2: External coherence: To what extent does the intervention’s design and implementation complement the partner’s own efforts and is coordinated with other donors’ activities?**

**The project was steered, implemented and monitored in a participatory way with the main stakeholders and implementing partner. Cooperation opportunities and synergies with a few similar initiatives from other donors were explored, but no window of opportunity arose throughout the implementation period.**

Cooperation opportunities and synergies with similar initiatives from other **donors** were explored, but not materialised. Again, this is mainly due to project’s strong technical focus on CRM production and PT provision, which are not tackled by other donor projects in Egypt. Still, the project did not coordinate or consult with the Transforming the Inspection and Assessment of Food Business (TAIB) project, funded by USAID, which previously analysed CRMs demand and exceeding levels of mycotoxin and pesticides. The project could have **benefited positively** from such exchange, as it experienced delays due to the repetition of needs assessment.

The project did not participate in any **official donor coordination**<sup>5</sup> meetings, as its focus is not represented in any donor thematic group in Egypt. The discussions of the two thematic groups, “the Agricultural and Rural Development” and “MSMEs Development” of the Development Partners Group (DPG) are only indirectly related to project framework conditions or sectoral context, and unrelated to its technical focus nor implementing partner. Hence, participation would have not have added any value. The project also attempted to contact the Food and Agriculture Organisation (FAO) project, “Promotion of Value Chains in the Agricultural and Food Sector”, with no response.

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<sup>5</sup> The Development Partners Group (DPG) consists of key bilateral and multilateral donors, including the IMF, the World Bank, the European Bank of Reconstruction and Development (EBRD), the United Nations and its agencies, as well as the United Kingdom, Germany, France, Swiss Cooperation, Korea, Japan International Cooperation Agency (JICA), and other development donors.

The project applies a **semi-hybrid management model** and has elaborated a thorough steering concept (please see dimension 3 under “Effectiveness”). Project management is undertaken by PTB, mostly remotely as the team is based in Germany. **Technical steering at country level** is done through the national expert, who is in contact with the NIS team weekly, as well as during missions of the PTB team to Egypt (e.g. for needs assessments, training, installation of equipment, etc.) and in addition to the operational planning and AB meetings.

Virtual meetings, including jour fixe/monthly meetings, between PTB and NIS were planned on regular basis, but could not be sustained. Most interviewees confirmed that remote steering is considered a new experience that is neither widely used nor preferred in the Egyptian public sector, especially as the project represents the first bilateral project between PTB and NIS. NIS and other QI actors had no previous experience with remote steering before the start of this project. Egyptian state actors on all levels prefer physical presence and follow up.

It is important to highlight that the **real innovative aspect** concerning external coherence is the participatory steering nature of the project, not only with NIS but also with other important QI actors, and one private sector representative. Without the involvement of more SMEs and QI actors, the project outcomes and impact might not be achieved.

Evaluation finding confirmed a **trustful relationship and efficient exchange in the AB** (e.g. adequate number and duration of meetings, types of exchange and communication, etc.), even with the decline in participation rate in comparison to project’s start. They also confirmed that the AB has the right composition, type and number of actors, and there are no missing public QI actors. However, about 70% of interviewees expressed their wish for more participation of SMEs in the AB, as they are interested to buy CRMs locally, especially with the current economic crisis. The fact that NIS was reluctant to allow some actors to join and benefit from training opportunities<sup>6</sup>, limits their role to mere AB meetings attendance, and also raises concern about future commitments in the project.

### Summarised Evaluation

Coherence is assessed as “successful to a limited extent” (3.0). Project was designed in a complementary manner. Possibilities for coordination with projects of other donors, GIZ or PTB turned to be limited, due to the project’s unique technical focus. However, the project might have missed one important cooperation opportunity with another USAID project that could have saved resources. The real innovative aspect concerning external coherence is the participatory steering, implementation and monitoring nature of the project, not only with NIS but also with other important QI actors, and one private sector representative. The intervention did not use common existing monitoring or learning systems of neither the partners nor donors.

| Criterion | Evaluation dimension   | Weighting | Appraisal |
|-----------|--|-----------|-----------|
| Coherence | Internal coherence: Within German DC, the intervention was designed and implemented in a complementary manner, based on the division of tasks. | 50%       | 3         |

<sup>6</sup> ISO/IEC 17043:2023 “Conformity assessment - General requirements for the competence of proficiency testing providers”.

|                                    |  |     |   |
|------------------------------------|--|-----|---|
|                                    | External coherence: The intervention's design and implementation complement the partner's own efforts and are coordinated with other donors' activities. | 50% | 3 |
| Global assessment of the coherence |  |     | 3 |

### 5.1.3 Effectiveness

**Dimension 1: To what extent has the intervention achieved its objective (at outcome level) according to the indicators agreed upon?**

| Outcome indicator  | Degree of fulfilment (in %) | Appraisal (A-C)* | Justification   |
|--|-----------------------------|------------------|---|
| 1. 25 testing laboratories from the food processing sector participated in the proficiency tests offered by NIS.<br><br>Initial value: 5 testing laboratories (2021)<br><br>Target value: 25 testing laboratories (2025)<br><br>Current value: 5 (01/2025) | 0%                          | C                | From a theoretical and design-based perspective, the indicator measures rightfully an increase in the use of additional services offered by NIS (results of Output 3). From a technical and realistic point of view, this indicator cannot be achieved during the current phase, given the baseline.<br><br>Due to the delay in activities under component 2, outcome indicator 1 is not expected to be achieved by end of the phase. |
| 2. NIS offers its customers an additional technology for metrological traceability for food analysis.<br><br>Initial value: 3 technologies (2021)<br><br>Target value: 4 technologies (2024)<br><br>Current value: 3 (01/2025)                             | 0%                          | B                | Indicator 2 measures whether the project objective was fulfilled.<br><br>The project worked on some required prerequisites to achieve this indicator, mainly the purchase of instruments and CRMs, but some important steps still remain missing <sup>7</sup> . Due to delays in receiving the equipment, the indicator is not expected to be achieved by end of this phase.  |
| 3. NIS offers 4 new accredited proficiency testing programmes according to international   | 0%                          | C                | The indicator measures an increase in the use of additional services offered by NIS (results of Output 3). From a   |

<sup>7</sup> E.g. ISO 17034 and the management system, IS) 33400 series.

|  |  |  |   |
|--|--|--|---|
| standards (ISO/IEC 17043:2010) in the field of food analysis.<br>Initial value: 1 (pH value; 2021)<br>Target value: 5 (2025)<br>Current value: 1 (01/2025) |  |  | technical and realistic point of view, this indicator could not be achieved in the designated project’s phase, especially as NIS did not offer comparative measurements in complex food matrices. |
| *: <i>Appraisal: A = adequate indicator; B = slight objections; C = poor indicator, to be revised if applicable</i>  |  |  |   |

The outcome indicators correctly assess objectives’ achievements and use by target group. The evaluation team slightly objects to one indicator, and assesses the other two as “poor”. This is due to the fact that they are overambitious and unrealistic to be achieved by the end of the phase, especially as outcome indicators 1 and 3 depend on the achievement of activities under Output 2.

**Dimension 2: To what extent have the intervention’s activities, inputs and outputs considerably contributed to achieving the intervention’s objective (at outcome level)?**

**Overall, some activities were successfully carried out. It is unexpected that neither the module objective or outcome indicators will be achieved by the end of the current phase. Interviewees cited more internal than external factors affecting implementation quality negatively.**

As no security clearing was achieved until July 2022, the project could not launch its activities in 2022 as planned. With regard to **Output 1**, the project overachieved in the two indicators. The networking component was perceived as **the most significant change**. Bringing different actors in the sector together in an organised way was seen as a strong needed addition for achieving the project objective. During 2023 and 2024, four meetings were conducted with an average of 160 attendees from governmental entities, academia and Civil Society Organisations (CSOs). However, no exchange took place as planned, for instance, on the costs and range of available QI services, which is a key topic and prerequisite step for NIS to increase its services.

With regard to indicator 1.2., 98 instead of 80 employees of the QI service providers of the food processing and control sectors were trained by NIS in the form of a programme with successive modules on metrological traceability, measurement uncertainty and quality assurance.

As for **Output 2 activities**, the project started by finalising a needs analysis with QI service providers, private companies and the civil society. As results were assessed as poor, it was decided to repeat the exercise again, along with re-examining NIS capacities for the production and certification of the identified CRMs. This examination revealed the indispensability of procuring a mass spectrometer, in addition to further procurement of materials for the production of CRMs. The re-examination and approval procedures led to delays on all levels and the non-achievement of output indicators 2.1 and 2.2. Production of the CRMs can only begin after the mass spectrometer has been delivered and installed. Still, NIS interviewees mentioned **equipment purchase as the first most significant change**, as it will add value to the Egyptian market. Project management and strategic planning were mentioned as the **second added value** induced by this project.

The improvement of the competencies of the NIS as a service provider for carrying out comparative measurements for food analysis planned for **Output 3**, was outlined in the workplan following the procurement of the mass spectrometer (Output 2). Due to the delays under Output 2, a new approach was agreed upon with NIS and communicated to BMZ, resulting in starting Output 3 activities in parallel to activities under Output 2. Hence, the project trained NIS employees and 2 EGAC employees during

a 2-days training on the new standard requirements of ISO 17043 for accreditation of PT providers. However, with continuous delays in receiving the equipment and reference materials, the project decided in Nov. 2024 not to invest any resources in Output 3 and to focus all its resources on Outputs 1 and 2.

Based on **evaluation team assessment**, the project could have still **hired or used more technical experts with different specialty areas** to complete the needed specified trainings, providing technical advice and/or on-the-job-training (e.g. statistical test) with respect to Outputs 2 and 3, even prior to the receipt and installment of equipment, accelerating and completing the process of required CD.

**With regard to equal accessibility of target group to and usage of outputs**, NIS' representatives assessed food safety testing and Integrated Database Management System (IDMS) trainings as relevant, adequate and of good quality. The ISO 17043 training, however, was considered very **relevant but too short in duration**, its **content was not practical enough** and missing important topics such as statistics for PT providers (ISO 13528:2022). During interviews, NIS requested more training on the accreditation of RMP (Reference Material Producer) and ISO 33400 series to achieve Outputs 2 and 3, which is a prerequisite and relevant for the accreditation of RMP. NIS' decision to **limit participation in trainings** chiefly to NIS personnel and not to other network stakeholders was also criticised, as more stakeholders would have benefited from trainings (e.g. test methods).

**While interviewees belonging to different organisations easily agreed on project achievements, they could not agree on the reasons and responsibilities for delays under Output 2 and consequently Output 3 activities, attributing them to several internal factors and one external factor.**

Non-achievements of project objectives are mainly attributed to **internal factors related to project planning and steering**. The repetition and validation of the needs assessment exercise took longer time and efforts than originally planned. PTB's delay of procurement and purchase process to the second instead of first year, NIS' lateness in sending the customs clearance letter, the unavailability of NIS' representative to receive the ordered CRMs on the specified delivery date in Sept. 2024, as well as the late involvement of PTB's technical expert in the decision-making process collectively slowed the implementation process. From the **perspective of technical experts**, whether PTB's, NIS' or the evaluation team's technical expert, the needs assessment is a secondary activity after purchasing the equipment. This is because for the production of any kind of CRM in food safety analysis (e.g. for veterinary drugs, mycotoxins and pesticides), a mass spectrometer is required. From **project management point of view**, conducting a thorough needs assessment is the first step to make certain that budget is allocated to a requested item and sustainability is ensured.

Additionally, the ineffective virtual appraisal mission with neither a proper needs assessment nor an examination of NIS' PT Unit and its activities contributed to non-achievement of project objectives. It is well known that PTB's procurement processes take 6-12 months, so even if the project had procured the equipment in the first year, the ambitious high targets set during appraisal mission still could not be achieved in the last two years of implementation.

Finally, the main **external factors** contributing to non-achievement of objectives are the long steps that governmental entities have to follow, depending on the prices of purchased goods. Currency devaluation during the project implementation period increased in the price of equipment, making it higher than the ceiling allowed for purchases by NIS. This resulted in the addition of administrative steps and approval of the Prime Minister to the process. The long custom clearance process was not foreseen by both project partners.

### **Dimension 3: To what extent has the quality of the intervention's implementation considerably contributed to achieving the intervention's objective (at outcome level)?**

All CW success factors of the CW self-assessment template were assessed relatively positive by PTB, stakeholders and NIS team. The PTB team **applied the tools with sensitivity to the context** and adjusted them to avoid potential conflict. PTB team **involved partners in the systematic application of all mandatory CW tools** and jointly analysed and discussed options for action together.

#### **CW – Strategy Factor**

**Strategy** was the most **positively assessed** success factor. The project strategy (e.g. results model, Operational Plan (OP), CD strategy) has been **developed, updated and implemented in a joint process with the project partners** (e.g. minutes of meeting of AB meetings). Strategic planning was highly appreciated and cited as one of the **learning experiences** of this project.

The project developed and used an explicit **CD strategy** addressing QI of the food processing sector based on a holistic approach (individual, institutional, network), covering technical trainings, advise and awareness raising, mainly directed to NIS. However, additional relevant and specific further education measures to reach Output 2 and Output 3 were neither fully addressed enough in the CD strategy nor implemented (e.g. training for calculating measurement uncertainty, Bureau International des Poids et Mesures (BIPM) requirements and recognition processes, statistic for PT providers (ISO 13528:2022), accreditation and management systems). CD measures, either identified in the CD strategy for NIS or implemented, could not yield to developing new processes in NIS, as per project's objective (e.g. NIS to become RMP and PT provider for food analysis), even if the **equipment** was received on time.

#### **CW – Cooperation Factor**

Cooperation was assessed **less positively than strategy**, with **discrepancies** between the views of partners and stakeholders on the one hand, and the PTB team on the other hand in relation to the **statements in the CW assessment template**. The project missed some necessary contributions with regard to accelerating the customs' release and approval processes from partner's side (please see also coherence).

87% of respondents positively agreed that the project has **purposefully and successfully shaped the communication and cooperation relationships between PTB, partners and relevant actors**. The project did not offer enough training for some stakeholders, and more benefits/opportunities (e.g. trainings, involvement in decision making processes) should be considered in the next phase to keep them engaged and committed. Keeping participants engaged and interested in the network is also challenging, as most actors involved benefit only indirectly from the project activities, but they are still essential for a holistic approach (please also see "coherence" for more details).

#### **CW - Steering Structure Factor**

A **clear and flexible steering structure** at the political and technical level was elaborated and established in a participatory way, complemented by a national AB to ensure the involvement of relevant actors of QI of the food processing sector in Egypt.

The main purpose of the established AB is to provide non-binding strategic orientation to the management of the project, with no decision-making power. Respondents<sup>8</sup> assessed the AB discussions **as efficient and reflective of their interests and priorities**, expressing their **satisfaction with their frequency, content, topics, structure and decision-making process**. Among the reasons of

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<sup>8</sup> Results of CW assessment tool filled out by project team and AB members were compared and triangulated with interviewees and assessment workshop results conducted in jan.2025.

**dissatisfaction** was that the exchange of information focuses more on the discussion of pre-planned activities rather than the identification and planning of activities, and that some AB stakeholders did not benefit from the project activities (please see 5.1.2 “external coherence” and “cooperation”).

The project’s **RBM system** is uploaded online and meets the requirements of a sound, practical and learning-oriented system. It comprises an updated results model with partners, indicators’ definition sheets, risk monitoring sheets, M&E plan and OP of the three outputs. All indicators were operationalised with baseline and target values. An operational plan was devised and monitored in a participatory way with NIS. The monitoring system is updated on a monthly basis by PTB team, with sufficient documentation of each OP review workshop with NIS. An online folder was created for the NIS team to have regular access to. However, NIS did not access the uploaded documents, nor made any contributions.

### **CW – Processes Factor**

**The project analysed processes that occur independently of the project in its sector, established links** and documented it in a process landscape map. The project could neither **sufficiently establish nor contribute to existing processes** in the sector, as it has not achieved its planned objectives yet.

The **evaluation team** still concludes that, the project could have benefited from a deeper analysis of relevant processes in relation to Outputs 2 and 3<sup>9</sup>, working on assessing the current implementation state of the PT and CRM production, and on scenarios on how NIS can contribute to changes in the sector (e.g. NIS subcontracting tests to accredited food labs).

Finally, some **internal appropriate processes** have been initiated with the implementing partners and stakeholders, contributing to learning on all levels, steering, cooperation and joint management. A core team and a supporting team were hired, contributing to project management and the technical focus, which was assessed as **adequate and efficient**. The administrative process of purchasing equipment by PTB was assessed as relatively fast, in comparison to other projects and countries (see chapter 5.1.4, “Efficiency”).

### **CW – Learning and Innovation Factor**

Learning and innovation statements were mostly assessed positively by both partners and team in comparison to processes, steering and cooperation CW success factors. Most participants completely agreed or tended to agree with the statements related to, first, **project promoting technical and institutional innovations within the partner system**, and second, **learning objectives and corresponding changes in the partner system (organisational level, cooperation between actors, QI system, etc.) were defined and agreed upon with the management level of the respective stakeholders and the politically responsible individuals**.

The evaluation team, however, does not share the same opinion. The primary focus of CD in this phase was on **individual and network levels only**. No clear learning objectives or target group for each module were comprehensively defined to further utilise the content in other occasions and embed it in the NIS’ training programme. The individually-acquired knowledge has still not led to structural adaptations or process **innovations** on the institutional level.

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<sup>9</sup> E.g. requirements for accreditation of PT providers and Reference Material producers (RMP) and their management system, CRM recognition process, etc.

**Dimension 4: To what extent has the intervention leveraged potentials of unintended positive results and reacted to risks and/or the occurrence of (unintended) negative results?**

**The intervention has leveraged potentials of unintended positive results and reacted to risks and the occurrence of (unintended) negative results.**

The project has responded appropriately to the risks mentioned in the project proposal by **developing a module-specific risks and safeguards monitoring system**. The project monitored possible risks on a regular basis with partners. No **negative unintended direct results** were achieved nor are foreseen, as a direct result of project interventions.

Some interviewees mentioned that the project contributed to **unintended positive results**, mainly raising more awareness about PTB's support areas. Through networking activities, QCAP (Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food) was **exposed to PTB's added value, knowledge and experience**, and a cooperation opportunity was materialised between QCAP and PTB's bioorganic mass spectrometry working group lab in Braunschweig. A QCAP scientist visited the working group lab for one week and was trained on milk protein analysis (for allergen testing). The project facilitated the exchange visits and contributed with time and capacities, while all expenses were covered by QCAP. As the experience was very positive, both parties highlighted the possibility of further exchange in the next project phase.

**Summarised Evaluation**

Effectiveness was assessed as "successful to a limited extent" (3.3). The project is not expected to achieve its objectives by the end of the phase. However, the project managed to complete some important activities in relation to CD. Though some internal factors affected quality of implementation, it greatly benefited from a systematic application of all mandatory CW tools. No unintended negative results happened as a result of the intervention.

| Criterion                              | Evaluation dimension  | Weighting | Appraisal |
|--|---|-----------|-----------|
| <b>Effectiveness</b>                   | The intervention has achieved its objective (at outcome level) according to the indicators agreed upon.   | 25%       | 4         |
|  | The intervention's activities, inputs and outputs have considerably contributed to achieving the project's objective (at outcome level).              | 25%       | 4         |
|  | The quality of the intervention's implementation has considerably contributed to achieving the intervention's objective (at outcome level).           | 25%       | 3         |
|  | The intervention has leveraged potentials of unintended positive results and reacted to risks and/or the occurrence of (unintended) negative results. | 25%       | 2         |
| Global assessment of the effectiveness |   |           | 3.3       |

#### 5.1.4. Efficiency

**Dimension 1: To what extent can the use of resources by the intervention be deemed reasonable with regard to the outputs achieved (production efficiency)?**

**The project's use of resources is deemed partially reasonable regarding the outputs achieved. Neither could the achieved outputs be delivered using fewer financial resources, nor would a different use of financial resources increase project results.**

As of February 2025, the **disbursement rate** of overall project funds (1.000.000 EUR) is 68%. According to the available financial data, the disbursement rates for the three outputs are lower than initially planned in the proposal. Internal and external factors, such as delays in the procurement process, customs clearance and NIS' unavailability to receive purchased equipment, led **to inefficiency** in terms of the **timely delivery of project outcomes and outputs**.

Regarding the **planned distribution of budget between the three outputs**, the budget was planned to be almost equally spent for the Outputs 1 and 3 (Output 1: 20%, Output 3: 22 %), while the planned costs for Output 2 constituted 40% of the total project budget. This is considered **adequate overall**, as expenditures under Output 2 are evidently higher due to the need for the procurement of technical equipment to achieve overall objective.

Of the amount spent so far, 68% of the funds were allocated to the three outputs (Output 1: 12%, Output 2: 43% and Output 3: 13%) and 32% were allocated to general costs, which partially include the personnel costs of the PTB project team and administration, short term experts, as well as travel expenses. The amount spent for **general costs** (i.e. not associated with specific outputs) exceeds the planned amount by 21%. Although no reference to other PTB projects was made, general costs in comparison to overall costs seem to constitute a **relatively high** share of total expenditure. The allocation of financial resources **between the three components is reasonable**.

With regard to **different budget lines**, project budget was **planned to be allocated** as 62% for PTB staff and consultants, including their travel expenses, 25% for materials and equipment, 12% for human capacity development (HCD), and 1% for other costs. Of the total project budget, 25% was planned for purchasing equipment and materials, mostly going to Output 2. This is a relatively high share for this budget line compared to other PTB projects, where usually around 10-15% of the budget is dedicated to the procurement of goods. However, the assigned budget for equipment is **reasonable and justified** by the project's strong focus on metrology and the highly ambitious targets of establishing new measurement technologies within three years. In fact, considering the project objective, 250,000 EUR is a rather low budget for purchasing all necessary equipment to enable NIS to offer additional services. It is worth highlighting, that the project team managed to procure a mass spectrometer at **a very cost-efficient price in a relatively short time (5-6 months)**, because of the involvement and support of a PTB technical expert and an effective procurement process. Services and maintenance for the selected brand is available in Egypt, making long-term maintenance easy and efficient. The instrument is key to Output 2, and as such a pre-condition for achieving several output (2.1, 2.2) and outcome indicators (2 and 3).

**Project team's composition was found to be adequate.** The national expert is highly needed to continuously follow up and forward challenges. The setup of the network is demanding and requires the CW expert. Involving a PTB technical expert in the project proved to be cost-efficient. The project deployed the technical expert to increase technical know-how and enhance procurement processes, with much **lower costs** than those of hiring an international technical short-term consultant.

Comparing the **different cost categories within the budget** spent so far, it is evident that the only budget line where the **actual costs are equivalent to the planned costs** is the equipment and CRM purchase. The **largest gap** between planned and actual costs is in the budget line for human capacity development (HCD), where only 9% were spent by end of February, 2025.

The late start of project activities, the conducting of a second appraisal mission phase, and delays with custom clearance processes explain the low disbursement rate and non-achievement of outcome indicators, but does not entirely explain the low expenditure on HCD. **Expenditure on HCD** is perceived as **partially inadequate** for the project's focus on capacity development and advisory services, especially as NIS capacities and competencies have to be increased in additional areas. Additional trainings and further education, such as ISO 17034 and the management system and ISO 33400, should have been included in the CD and implemented to reach the ambitious objectives of Outputs 2 and 3. **More short-term experts** could have been hired to contribute to the advancement of technical aspects of the project, and eventually increase HCD expenses. The evaluation team **concludes** that the **re-distribution of funds** to other outputs would most probably have not led to better results achievement at output level.

## **Dimension 2: To what extent can the use of resources by the intervention be deemed reasonable regarding the achievement of the intervention's objective/outcome (allocation efficiency)?**

**At outcome level, the project was found partially efficient.**

The design of the project was assessed as logical but overambitious, and partially inappropriate with regard to the timeframe and target values of indicators. The **holistic and multi-stakeholder CD approach** and **participatory** steering were assessed as **satisfactory** to achieve the planned results. The analysis of a **"pure technical"** approach focusing solely on enhancing NIS' capacities versus **expanding the project's focus** to networking and technical enhancement of QI sector proved that achievements could have not been **maximised** with the same costs, nor could costs have been **reduced** while achieving the same results. On the contrary, the selected focus and approach contributes to more changes in the sector by increasing demand in follow-up phase.

Furthermore, the project appropriately did not wait for the arrival and installment of equipment, and started improving NIS' and stakeholders' qualifications and technical knowledge. However, the **practical use and application** of newly gained skills and knowledge did not take place (i.e. CRM production and dissemination, establishment of new processes).

According to all interviewees, **alternative ways to spend the budget** were not possible, which confirms that the budget was spent on the right items. **Maximisation of results** could not have been achieved better by leveraging synergies with other projects of the development cooperation, as target groups and focus are different.

Whether **more and/or better outcomes** could have been achieved with **another intervention approach** was assessed as **positive**. Purchasing the equipment as the first activity in the first year of the project as it was budgeted, and involving the technical expert at an earlier stage in the project activities could have **increased outputs**. The reasons why NIS only mentioned procurement purchase along with the involvement of the technical expert in 2023 is still unknown. Additionally, the project **missed the opportunity** of consulting with TAIB project, funded by USAID, with regard to its recent analysis of CRMs demand and exceeding levels of mycotoxin and pesticides. Consulting with TAIB project might have **saved resources** spent in the second assessment conducted. The evaluation team still concludes that there is **no proof** that the objectives could have been achieved with procurement

and involvement of technical expert in first year and contacting TAIB project, as they were overambitious.

Overall, efficiency was assessed as “successful to a limited extent” (2.5). The project’s use of resources is deemed partially reasonable regarding its outputs as well as its outcomes achieved. Due to the late start of project activities, conducting a second appraisal mission phase and delays with custom clearance processes, less activities could be conducted than originally planned. The evaluation team concludes that shifting funds to other outputs might not have led to a higher achievement.

| Criterion                           | Evaluation dimension   | Weighting | Appraisal |
|-------------------------------------|--|-----------|-----------|
| <b>Efficiency</b>                   | The use of resources by the intervention is deemed reasonable with regard to the outputs achieved (production efficiency).                     | 50%       | 2         |
|                                     | The use of resources by the intervention is deemed reasonable with regard to the achievement of the objective/outcome (allocation efficiency). | 50%       | 3         |
| Global assessment of the efficiency |  |           | 2.5       |

### 5.1.5. Higher-level development results

**The contribution to higher-level development changes —especially at the level of beneficiaries— is not prognosed to take place by the end of current phase.**

The project is contributing to the programme’s objective: “the framework conditions and the financing environment enable the private sector to grow and create jobs”. The project particularly **contributes to programme’s objective indicator 1<sup>10</sup>**, through providing data on the use of the Rapid Diagnostic Tool (RDT) to measure how Egypt is able to improve standards in the expansion of its QI since 2020 (please see “Section 6” for more elaboration). Since April 2024, the project has been embedded in the new successor programme, “Private Sector and Financial System Development “.

The evaluation team assessed **the attribution gap** between the project and programme objectives as long and rather indirect<sup>11</sup>. Although the indirect target group is the private sector, and the intermediate target group is NIS, the main project support is directed to the intermediary organisation (NIS), and the provision of services to the private sector is very indirect in this phase. No contribution to **disadvantaged groups** was planned in this phase, which is also logical.

The module only **plausibly contributes** to the programme’s core problems in relation to the inability of SMEs to make sufficient contributions to sustainable and job-creating economic growth. This could only be achieved **if the private sector was more involved in project activities, which did not occur**. At this stage, no **evidence of causality** between the project’s interventions and improvement in framework conditions and the financing environment can be given, as per programme’s objectives.

Though the **project’s concept** contributes to several SDGs, it is **too early to assess or prove** the project’s contribution to improved critical consumption (SDG 12), improved infrastructure and quality assurance in relation to international standards for the food processing sector (PD/GG 2 and SDG 9), increased acceptance of Egyptian products in the global market (SDG 17) and improved socio-economic living conditions (SDG 16). The project did not achieve its objectives- neither on outcome nor output levels-, or in terms of services that reached **the final intended target group**.

Finally, as the implementation of the project is still in its infancy, no **economic, environmental or social impacts** have yet materialised, nor have there been any conflict of objectives between these dimensions.

**Dimension 2: To what extent have the results achieved by the intervention (at outcome level) contributed to the intended or implemented higher-level changes.**

**The contribution to higher-level development changes is only plausible and not backed up by evidence.**

To assess this dimension, the evaluation team refers to the **plausibility of contributions rather than causality**. One can **plausibly assume** that the project’s activities are contributing to **hypothesis 1**: NIS uses its improved competences to extend the range of needs-based services, once equipment is installed. Consequently, services will be increasingly demanded by SMEs in the food processing sector due to more information on the economic benefits of metrological services (**hypothesis 2**). On the other

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<sup>10</sup> The framework conditions and services provided by the state for employment-orientated MSME growth have improved as measured by the World Bank indicators (*Ease of Doing Business* World Bank overall ranking, its sub-indicators and the WB/PTB *Rapid Diagnostic of Metrology*).

<sup>11</sup> The evaluation team did not conduct a methodologically sound impact assessment of the project, as it is out of the scope of this evaluation.

hand, this demand may also be caused by the improved quality of food products, and improved quality assurance mechanisms that consider international standards for the food processing sector (**hypothesis 3**).

The **contributions to the above-mentioned** hypotheses are already **partially achieved through** the established systematic and structured exchange between the QI and food processing sector, ensuring the alignment of services with demand, and raising awareness on the importance of metrology. Egypt's membership in regional free trade agreements are all **positive contributing drivers to the hypotheses' achievement**.

Still, the project has not managed to increase the number of testing and calibration procedures available yet, and hence **does not have a contribution to the following identified hypotheses in its results model**: (4) increased economic competitiveness and exportability of SMEs; (5) ensuring higher food safety for consumers; (6) acceptance of Egyptian products in the global market; and (7) improved general conditions of financing environment, allowing private sector to grow and create jobs. This could be explained by the long and rather indirect relationship between project's and programme's objectives.

**Dimension 3: To what extent has the intervention contributed to positive and not to negative unintended higher-level development changes?**

There are no signs that the project has contributed either positively or negatively to interactions at the level of beneficiaries in relation to the social, economic and environmental dimensions of sustainability.

**Summarised Evaluation**

Impact was assessed as "rather unsuccessful" (3.5). Project activities plausibly contributed to some intended higher-level changes only. The project did not just overestimate its objective, but also the impact that can be achieved or contributed to in a three-years period.

| Criterion  | Evaluation dimension  | Weighting | Appraisal |
|--|---|-----------|-----------|
| <b>Higher-level development results</b>                  | The intended higher-level development results have taken place or are expected to take place.                                     | 25%       | 4         |
|  | The results achieved by the intervention (at outcome level) have contributed to the intended or implemented higher-level results. | 50%       | 4         |
|  | The intervention has contributed to positive and not to negative unintended higher-level development changes.                     | 25%       | 2         |
| Total assessment of the higher-level development results |   |           | 3.5       |

### 5.1.6. Sustainability

**Dimension 1: To what extent do the partners, target groups and organisations involved have the capacities required to ensure that positive results are continued?**

**Good marks for sustainability were given by interviewees, despite the absence of tangible outputs and evidence. NIS has the institutional resources and mandate, as well as the willingness required to sustain the positive results of the project over time. Still, it is too early to assess, whether NIS and stakeholders have the required capacities, as financial and technical resources might represent a challenge.**

According to the evaluation team's and interviewees' assessment, the **selection of NIS** as implementing and political partner is **fitting and correct** to ensure ownership. Interviewees from the public and private sector were significantly confident that NIS has the right mandate, facilities<sup>12</sup>, adequate and sufficient human and technical resources and capacities to sustain the provision of additional services over time.

CD given **at individual level** is aligned with NIS' **CD internal strategy** for focusing on maintaining its staff by offering continuous incentives, added value and enhancing their capacities, especially since it is difficult to find qualified metrologists, and due to the government's policy of not hiring new staff in governmental entities. Based on the **technical experts' assessment**, NIS took a step forward in the scientific aspect, and gained a considerable amount of knowledge during trainings, especially on EU food safety tests and sampling requirements and the new technique for CRM production.

On the **institutional level**, NIS has the **mandate backed by decree**, supportive and responsive **management, resources**, and an **ISO 34 certification** that was peer reviewed by the EU-Twinning project in 2018. On **network and societal level**, Egypt's **integration** into the pan-African customs union, AfCFTA, and the COMESA, offers potential for the food processing sector to open up further markets in the region. The creation of CRMs corresponds to the **needs of future users**.

**Existing and foreseeable risks limiting sustainability** are first, the **budget cuts** NIS has been experiencing for the last three years. This puts into question NIS' ability to maintain equipment operation and capacities and accordingly challenges the continuation of provision of a broad scale of additional services. Second, NIS still lacks **key competencies** to achieve project's objectives, which will be thoroughly discussed under Dimension 2 below.

**Dimension 2: To what extent has the intervention considerably contributed to the capacity of partners, target groups and other organisations involved to continue the positive results?**

**The project planted seeds to ensure the sustainability of its activities. Still, NIS' technical capacities are not fully developed to achieve the project's objectives.**

The project did not achieve its objectives but initiated the required steps for NIS during 2022-2024 to achieve the project's goals in next phase. SMIC partially applied **a multi-actor and multi-level CD approach** to improve offered services. This included joint strategy development, sensitisation, awareness raising (e.g. metrology day), technical advice, trainings and initiating networking processes. It mainly focused on **individual CD measures** for NIS' technical staff. Offering and sustaining new services also requires **managerial, and not only technical capacities** to make use of improved services, which project activities focused on through networking component. Equipping, and CRM production were planned **on the institutional level** but the process was not completed, with more capacity building planned when equipment is installed. The individually-acquired knowledge was not

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<sup>12</sup> NIS has 20 labs including food testing CRM labs (organic, inorganic).

mainstreamed into **institutional structures**, and thus did not result, for instance, in **process innovations**. The advantages of the **network's** work were emphasised once again, in particular the joint training courses, the joint planning and the participation of stakeholders in the needs analysis for CRMs and awareness raising.

The evaluation team assesses, **NIS' technical capacities as not fully developed** to achieve the project's objectives soon. NIS still needs to master new equipment usage in food analysis and sample preparation for producing reference materials, and B) adapt their management systems to new standard requirements for both reference material production and PT provision. Practical knowledge in implementing the ISO 17043 and ISO 13528 standard requirements remains lacking. Offering and sustaining new services also requires **managerial, not only technical capacities** to make use of improved services.

The project could have also offered more support **on institutional level** in terms of **anchoring the modules in NIS' training plan** to continue offering trainings for more NIS staff and other stakeholders and contributing to sustainability<sup>13</sup>.

Few stakeholder representatives could join the training opportunities, as per NIS' request to **focus CD in this phase on its staff mainly**. **Commitment and continuation of networking activities** with sufficient and important actors, especially private sector, is of key importance to project activities and integral to its sustainability. This is mainly due to the fact that some actors involved only **benefit indirectly** from the project activities. At the same time, they are **essential** for the development of holistic services for the food processing sector, and their collaboration creates opportunities and mutual gains for their organisations and the sector.

### **Dimension 3: To what extent are the results of the intervention durable?**

**Under the prevailing contextual conditions, the results of the intervention are only partially durable.**

For **durable and persistent results, shifts in NIS' mentality** and an **inclination to cooperate more** with other QI actors and private sector are needed to achieve changes on network level, creating more demand for its services and generating more income. The project can rely on the **same participatory steering structure** in the next phase but should **examine**, whether its composition, structure and content need improvements to maximise benefits for all QI stakeholders and revenue from offered services.

**Adaptation in budget items** might also be required to finance a **marketing strategy and business plan**, to assess the feasibility of sustaining production once achieved. **Learning capacities** should be still strengthened on the **three different levels of CD**, with much more application opportunities to achieve structural adaptations on institutional level.

### **Summarised Evaluation**

Sustainability was assessed as "satisfactory to some extent" (3.3). Throughout interviews, high marks for sustainability were given despite the absence of tangible outputs and evidence. NIS has good

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<sup>13</sup> The evaluation team did not have access to NIS' training plan or curriculum to assess or validate the degree to which the offered modules are adapted or integrated based on trainees' feedback.

facilities, enough manpower, mandate and willingness to learn, but lacks steady financial resources. More efforts have to be exerted in the following phase to achieve and sustain positive results, increase the resilience and technical capacities of NIS and stakeholders, and expand the inclusion of private sector in the dialogue.

| Criterion                              | Evaluation dimension  | Weighting | Appraisal |
|--|---|-----------|-----------|
| Sustainability                         | The partners, target groups and organisations involved have the capacities required to ensure that positive results are continued.                          | 33.33 %   | 3         |
|  | The intervention has considerably contributed to the capacity of partners, target groups and other organisations involved to continue the positive results. | 33.33 %   | 4         |
|  | The results of the intervention are durable.  | 33.33 %   | 3         |
| Total assessment of the sustainability |   |           | 3.3       |

### 5.1.7. Summary of the intervention’s contributions to the 2030 Agenda for Sustainable Development

*-Universality, shared responsibility and accountability*

By implementing its **multi-actor/level and holistic approach**, the project is contributing to Egypt’s commitment to the SDGs of the 2030 Agenda, which are reflected and operationalised via the Egyptian SDS, pillars "economic development" and "knowledge, innovation and research".

The **project’s concept** contributes to SDG 16 (peace, justice and strong institutions), SDG 8 (economic growth) and SDG 9 (industry, innovation and infrastructure) through its focus on strengthening the joint steering capacities of the state and the private sector in the area of QI. It contributes indirectly through the traceability of food quality/food security to the implementation of SDG 2 (improved nutrition), SDG 3 (health and well-being), SDG 12 (sustainable consumption and production), as well as to the achievement of the goals through partnerships (SDG 17).

Finally, the intervention has been embedded in the **German DC framework** (see Chapter 5.11) and the project design is **built on using and improving existing systems and structures of partners** for the implementation of its activities. The project utilised NIS’ capacities and facilities in offering trainings for other QI actors. There are **no common systems for monitoring, learning and accountability** that can be used jointly. Finally, the project was not implemented with other donors (see Chapter 5.1.2 “Coherence”).

*-Interplay of economic, environmental and social development impacts*

**Agriculture** is Egypt’s most important economic sector in terms of employment and contribution to gross domestic product. In theory, metrological services adapted to the needs of the agricultural food processing sector will strengthen its product quality and thus its competitiveness. Improving the performance of Egypt’s QI is therefore relevant for all **three dimensions of sustainability**.

**Economic, social and environmental aspects** were considered in the **project design**. The project approach promotes an improvement in the realisation of the human right to adequate food, and therefore makes a direct contribution to **social impacts**. Second, the development of technical competencies, management capacities of the partner institutions and production of CRMs will enable processed foods to be tested in accordance with international standards. Efficient usage can be guaranteed with the enhanced capacities and competencies of NIS (**economic impact**). Finally, competitiveness and export potential of Egyptian products are increased. Accordingly, the project also makes an indirect contribution to **ecologically sustainable impacts**.

As the project has not yet achieved its objective and intended impact, **no economic, environmental or social impacts** have materialised. There are **no signs of conflict of objectives** between these dimensions, or contributions to unintended interactions between the social, economic and environmental dimensions of sustainability. Still, some positive interactions between the social, economic and environmental results are likely to materialise, if the project objective is achieved in the follow-up phase.

*-Inclusiveness/Leave no one behind*

The principle of LNOB (Leave No One Behind) was neither considered in the project design nor implementation through focusing on particular groups<sup>14</sup>. No indicators referred to any particular group in the manner of LNOB were mentioned in the offer and no LNOB analysis was conducted. The monitoring system included disaggregated data by gender. However, the **evaluation team assesses existing data at this stage as sufficient**. Conducting a detailed LNOB analysis with QI actors, who have technical backgrounds, without producing tangible outputs, would be **inadequate and unnecessary**. Finally, the project did not contribute to any **unintended negative or positive results at the level of beneficiaries or stakeholders**.

## 6. Assessment of specific evaluation questions

1. *What challenges is the project facing in further integrating the private sector, especially in the networking component?*

**While the private sector could be seen as a potential customer equal to governmental entities, the project faced challenges in integrating it. Dissimilar but complementing reasons for the underrepresentation of PS in networking components were given.**

The **main reason** for the challenges faced in integrating PS in networking component is **unawareness of private sector of current and potential services** offered by NIS. SMEs are unaware of existing services and suffer to find affordable accredited labs for food testing or for buying CRMs. SMEs prefer that NIS fills the gap in providing CRMs for food analysis, especially as governmental inspection entities affiliated with the Ministry of Health prefer that private companies receive calibration of their equipment from governmental entities when inspecting their operations, premises and raw materials. Hence, NIS as a government entity is more recognised and trusted by NFSA in CRM production, considering its competence in calibration.

Second, NIS has more of a **“reactive marketing policy”** that relies on personal connections rather than a proactive one, as the majority of its customers is governmental entities with whom it has personal connections in the framework of other activities. NIS has an active webpage in Arabic only that displays outdated services (status 2021) and training programmes it offers. The services posted online lack a clear description and pricing, with only an indication of the responsible lab and contacts, for each

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<sup>14</sup> For instance, female or disabled-led enterprises were not targeted. Other disadvantaged groups were also not mentioned in the offer.

service. When the evaluation team enquired about NIS services, their technical team sent a catalogue of services with full descriptions and the prices of the year 2022, which is not posted online. This **confirms** that NIS responds to requests rather than taking the initiative of actively promoting their services.

Third, the project **did not create tangible or beneficial outputs**, with the exception of some trainings to state-actors, during the current phase. The project approached numerous private entities on several occasions (e.g. participation in networking component, needs assessment, metrology day, etc.) and identified their needs. Still, the commitment of all stakeholders -including private sector- was challenging, as they have other **pressing priorities** to focus on rather than engaging in dialogue with **no short-term or intermediate results/benefits**.

Finally, it was recommended that project's operations in the next phase will **benefit** from further participation of big SMEs. Bigger SMEs should be regarded as potential customers, as they produce a substantial variety of products. Smaller SMEs prefer to send their samples abroad. The inclusion of more private sector will be easier in the next phase if project achieves the promised results.

*2. What challenges is the project facing in relation to data acquisition (e.g. Rapid Diagnostic Toolkit)?*

**The initial introduction of the RDT as part of of the first bilateral project between NIS and PTB did not fully ensure the ownership of the project partners to regularly provide updated information and conduct self-assessments of selected QI parameters.**

The **initial introduction** of the RDT tool as a measurement instrument to programme indicator 1<sup>15</sup> was decided by PTB with GIZ during the appraisal mission<sup>16</sup>. For a baseline study in 2020, PTB commissioned an external consultant for the collection of necessary data, before the project concept was developed. The project communicated and agreed with NIS' president during a virtual call in the inception phase that NIS will report on improvements in this indicator yearly, and hence the project can contribute to yearly programme reporting. However, necessary data for a repetition of the RDT assessment was not provided by NIS.

Although multi-fold reasons were provided, the evaluation team did not find **substantial evidence** to support its findings. Based on the **evaluation team's assessment**, the decision to use RDT and rely on NIS in provision of data was taken during appraisal mission before the project was conceptualised and agreed upon with partners, without thoroughly **investigating the feasibility of data collection** by NIS and the required **steps and approvals**. Grounded on internal regulations and administrative rules, public organisations are not allowed to submit or disclose data to any entity — particularly a foreign one— without **prior written approval** from the affiliated ministry. In special and extreme cases, the governmental entity even has to receive additional official approvals from the Central Agency of Public Mobilisation and Statistics (CAPMAS), depending on the kind, frequency and source of finance of data needed.

Although the PTB appraisal mission team communicated with NIS their responsibility to regularly update information on all QI parameters, the agreement, roles and responsibilities were **not documented, making it “non-binding” for a governmental entity**. As the data collection for the baseline was consultant-led, it is possible that NIS was not fully aware of the implications of a later replication as a

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<sup>15</sup> The government-set frameworks and services for employment-oriented SMEs growth have improved.

<sup>16</sup> The RDT was developed jointly by PTB and the World Bank Group as an instrument for quick assessment of a country's QI system. It can either be applied as a self-assessment by QI actors themselves, or as a consultant-led assessment.

self-assessment. There is **no written evidence** that responsibilities and implications of applying the tool were thoroughly discussed and agreed upon with the NIS management.

Finally, it is also unclear whether NIS has never initiated the approval process, or if it has collected the data and requested approval but was never granted one by the ministry.

## 7. Learning processes and experiences

Learning processes, primarily **on individual and network levels**, have been stimulated and steered by a short-term Organisational Development Consultant. Introduction of the **participatory project CW management tools** added positively to project learning and steering in particular, especially as most NIS staff have more technical than project management and development cooperation backgrounds. Although the use of key project management tools, such as the results model, process landscape and OP, is a standard and “normal practice” in any development project, it was distinctly appreciated in this particular project due to its **technical focus and background of NIS employees and AB stakeholders**. Introduction of instruments such as joint OP and monitoring of activities and the use of different CW tools was considered as an innovative method to ensure the transparency of the implementation processes, especially as management as a topic is new to most NIS personnel.

The process of **introducing the networking activities** was cited as the **second new learning experience** for the Egyptian QI sector under these questions.

## 8. Recommendations

### *Recommendations to the project team:*

#### Strategy

- The project should continue to support NIS to **produce CRMs in mycotoxins** until recognition. This can be achieved by supporting the ISO 17034 standard requirements implementation and adaptation of management system including ISO 33405:2024 (ISO 33400 series), and through on-the-job-training. A **stepwise approach** should be followed in producing CRMs for a realistic outcome.
- The project will benefit from a detailed **training plan focusing on the needs of NIS, governmental and private QI actors** involved in the project at the beginning of next phase, with clear specification of target groups and learning objectives of each CD measure.
- GIZ Egypt is planning to conduct a comprehensive gender analysis in 2025 based on the recently published Feminist Development Policy for DC operations in Egypt. The project can take the generic one as a base for its planned gender strategy and operations.

#### Learning, Innovation/Steering

- Project did not achieve its objectives but **planted the required seeds** for NIS during 2022-2024 to achieve the project’s goals in next phase (preparatory/orientation phase), especially as it is considered the first bilateral German project. Project should **continue using CW tools for learning and innovation in steering** the projects as they added value to NIS managerial and steering capacities, expanding their understanding of development cooperation.
- Project should clarify the **contributions of implementing partners to data collection and/or reporting** in the implementation agreement, and not simply rely on verbal agreement or

communication. Egyptian governmental entities need **official permissions** to share data with any non-governmental entity.

- Project should include a **technical expert with knowledge about QI processes** in the **design phase and steering and strategy discussions** (e.g. some topics of AB meetings) to accelerate the implementation process, particularly in other other similar projects with such technical focus.

#### External Coherence/ Steering

- Bringing all relevant people together at an early stage, sensitising them to each other's work and involving them in joint coordination processes has proven to be a successful approach, and can contribute to ownership. Project should rely on the **same participatory steering structure** in the next phase but should explore whether **the structure, ToR and content need expansion or improvements** to maximise benefits for all QI stakeholders and revenue from offered services.
- Project should create **benefits/opportunities** for network stakeholders and users of CRMs on food safety to keep them engaged. This can be achieved either by providing them with trainings (related to test methods and validation, ISO 17025 and ISO 17043 topics, etc.) or by benefiting them from the existing training programmes.
- Project should continue **opening dialogue channels** with bigger private sector companies as **potential customers**, as they produce a substantial variety of products and are willing to test their products locally, more than smaller companies. This can be achieved by understanding their priorities and needs to make them more engaged.

#### Internal Coherence

- Project should follow up on **identified cooperation opportunities** (e.g. awareness raising, food quality) during appraisal mission for the next phase, to improve internal coherence.

#### ***Recommendations to partners***

##### Sustainability

- NIS mainly relies on existing informal contacts to sell its services. It should continuously **update** its service catalogue, **proactively market** and **raise awareness** on it through official channels.
- NIS should invest resources not just in its **business plan** to market its services, but also in a **feasibility assessment** on how it can **sustain project's output** (e.g. CRM production), to ensure sustainability.
- NIS should **update its training programme** and integrate newly developed curricula based on the needs of food testing labs, to continuously use it for trainings offered for the network of QI members in the future. Trainings topics can include method selection, development and analysis of mycotoxins, and sample preparation.

#### ***Recommendations to the International Cooperation Department (Group Q.3)***

##### Relevance

- Projects focusing on metrology mainly will benefit from having a **broader focus**, embedding in project concept activities focusing on networking, awareness raising and exchange of experience with potential gains and joint activities. QI and the food sector have many important actors that can act as potential future customers.

- **Rules for customs clearance** and the **procurement of equipment** are time-consuming and differ from one country to another. They need to be taken into consideration **in the planning and timeframe** of projects with similar focus in the offer.

#### Steering, Strategy

- Projects with similar technical focus should be advised to **start with the procurement processes of required equipment/goods** in the **first year** of project implementation.
- Projects with similar complex technical designs covering food safety analysis, reference material production and traceability, and PT provision should include **technical experts, either based on short term contracts or through agreement with PTB labs**, in the implementation phase as early as possible.

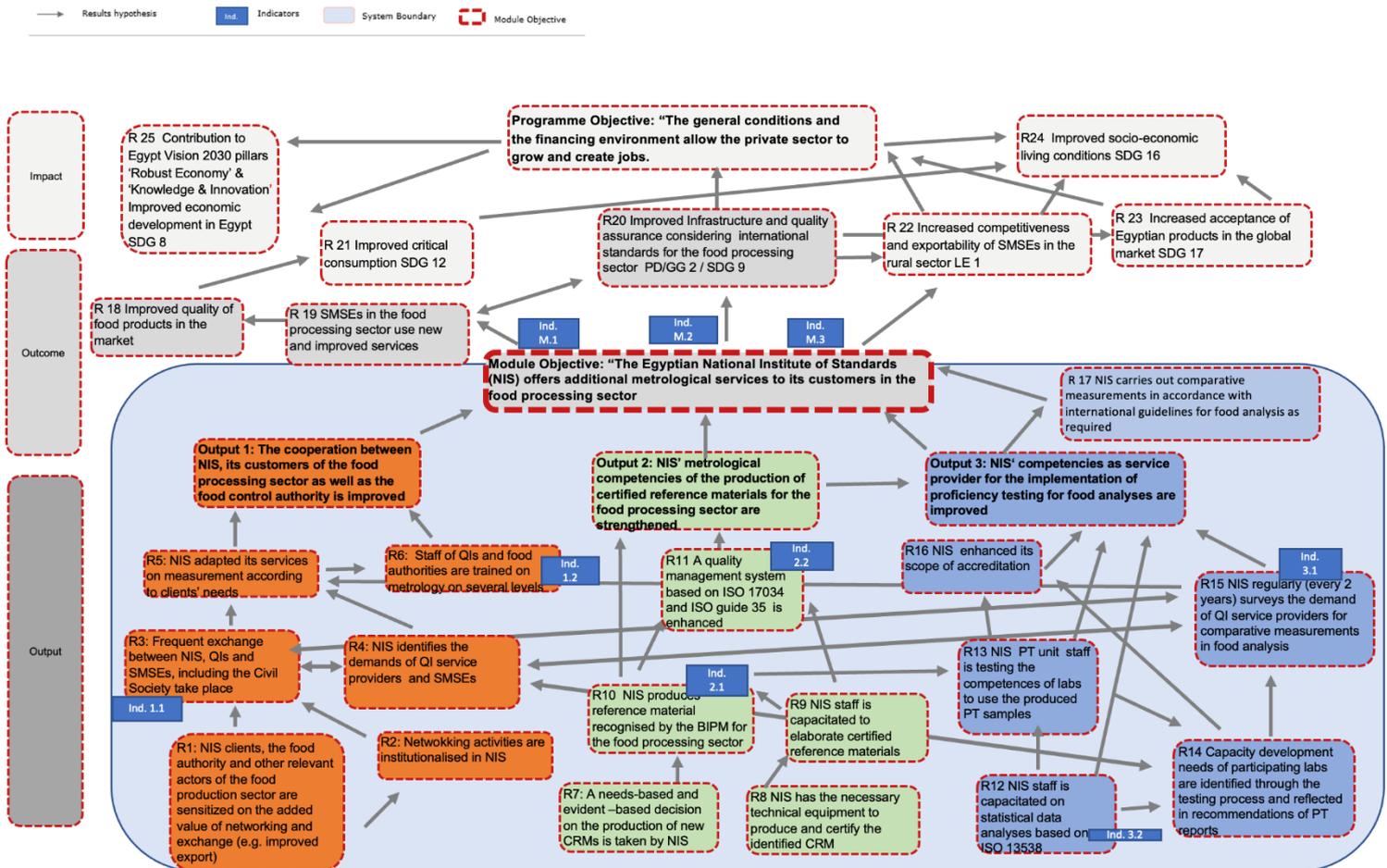
#### **Recommendations to the evaluation unit of Working Group Q.01.**

- The evaluation unit should **include project coordinators from other regions** —as much as resources allow— in all evaluations to foster learning between projects, as they bring beneficial PTB experience to implementation.
- The evaluation unit should **review the English version of the evaluation report template** and align terminologies used with the inception report's template in English. As evaluators are asked to use British English when writing the report, terminologies in the template should also be updated with that regard.
- The Evaluation Unit should consider including a **table that calculates the total score** of various OECD criteria automatically in the evaluation template. Guidance on how to describe grades that fall between two grading categories (e.g. 3.5) should also be provided in the template.

## **9. Annexes to the evaluation report**

1. Results Model "Wirkungsmodell"
2. References and Reviewed Documents
3. Overall Interview Guideline
4. Assessment Workshop Results
5. Interviewees' List

### ANNEX I: Results Model “Wirkungsmodell”



Source: SMIC project, 26.11.2024.

## Annex II: References and Reviewed Documents

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**Annex III: Overall Interview Guideline**

|                      |                 |                    |
|----------------------|-----------------|--------------------|
| <b>Date and Time</b> |                 |                    |
| <b>Place</b>         |                 |                    |
| <b>Name</b>          | <b>Position</b> | <b>female/male</b> |
|                      |                 |                    |

|                            |  |
|----------------------------|--|
| <b>Interview Code</b>      |  |
| <b>Involved Evaluators</b> |  |

**RELEVANCE**

**Dimension 1: Alignment to policies of partners and BMZ**

- 1- Compliance with partners' national plans, sector policies and strategies, etc.
- 2- Compliance with international themes, standards, conventions, etc.
- 3- Compliance with BMZ development policies orientation, etc.

**Dimension 2: Alignment to stakeholders' and target group's needs** *(including the needs and capacities of disadvantaged and vulnerable stakeholders)*

- 1- Alignment to stakeholders' needs.
- 2- Alignment to beneficiaries' needs.

**Dimension 3: Appropriateness of design**

- 1- Reason for current design/how the project was designed.
- 2- Reason for the three components.
- 3- Appropriateness of design to achieve objective (indicators, objectives, timeframe, etc.).

**Dimension 4: Response to change**

- 1- Response to changes in environment *(contextual, working, political, etc.)*.
- 2- Response to changing needs.
- 3- Response to COVID-19 pandemic.

**COHERENCE**

**Dimension 1: Internal coherence**

- 1- Types of synergies which (could) have been leveraged with other GIZ/PTB projects (e.g. *PSI, regional PTB projects in Africa, Pan African Free Trade, Alliance for Product Quality, AIP, etc.*).
- 2- Description of the coordination mechanism within GIZ/DC.

### **Dimension 2: External coherence**

- 1- Description of the coordination mechanism with implementing partners.
- 2- Potential synergies with other actors/donors (e.g. *FAO, other labs in Africa, donors, etc.*) working in the same field.
- 3- Description of the coordination mechanism with other donors/actors.
- 4- Description and assessment of coordination mechanism with PS and challenges in further integrating the private sector, especially in the networking component.

## **EFFECTIVENESS**

### **Dimensions 1+2: Achievement of intended objectives**

- 1- Achievements, including indicators on outcome and output levels, and the most significant changes.
- 2- Usage of outputs by target group (TG).
- 3- Equal accessibility of TG to outputs.
- 4- Factors affecting achievement/non-achievement (internal/external factors).

### **Dimension 3: Quality of implementation**

- 1- How successful were internal + external steering?
- 2- Detailed roles, contributions and responsibilities of partners (e.g. *including political backing, monitoring of indicator 1*).
- 3- Quality of monitoring and knowledge management systems.
- 4- Introduction of new learning experiences and processes, and lessons learnt.
- 5- Challenges in relation to data acquisition (e.g. *Rapid Diagnostic Toolkit, monthly monitoring reports, etc.*).

### **Dimension 4: Unintended results**

- 1- Which were the main important unintended results?
- 2- How were unintended results + risks monitored?

## **IMPACT**

### **Dimensions 1+2: Achievement of higher-level results**

- 1- Achievement of impact/intended achievement of impact in future.
- 2- To what extent can the higher-level development changes (social, economic, environmental dimensions and the interactions between them) be identified/foreseen at the level of the intended beneficiaries?
- 3- Achievement of impact on TG level (e.g. *including disadvantaged groups*).

**Dimension 3: Contribution to higher-level unintended results**

- 1- Which unintended results occurred because of the project?

**EFFICIENCY****Dimension 1: Production efficiency**

- 1- Were the results achieved on time, as planned? Why did delays occur – if applicable?
- 2- Extent to which achieved outputs have been delivered using fewer financial resources (minimum principle)/AND outputs increased by using the financial resources differently (maximum principle)?
- 3- Project capacities, resources/Steering Assessment.

**Dimension 2: Allocation efficiency**

- 1- By which other means and with which costs could the same results have been achieved?
- 2- Partners' contributions.

**SUSTAINABILITY****Dimension 1: Capacities of stakeholders and beneficiaries**

- 1- How far are stakeholders and beneficiaries able and willing to sustain achievements?
- 2- How far are partners, target groups and organisations have capacities (*e.g. mandate, access to information, resources, power and influence, organisation level, etc.*) to deal with existing or foreseeable risks (resilience)?

**Dimension 2: Capacities of stakeholders and beneficiaries**

- 1- How far did the project contribute to increased capacities (individual, institutional, structural)?

**Dimension 3: Durability over time**

- 1- How far will the achievements sustain/how far are they anchored in partners' structures?
- 2- How far is the durability influenced by context?
- 3- Recommendations for next phase.

**Annex IV: Assessment Workshop Results**

| Evaluation Criteria           | Assessment Statements  | Participants' Assessments |                 |            |            |       |
|-------------------------------|--|---------------------------|-----------------|------------|------------|-------|
|                               |  | ++                        | +               | -          | --         | NA    |
| <b>Relevance</b>              | 1. To what extent are the project's objectives relevant to your own strategies, needs and priorities?  | X X                       | X X<br>X X<br>X |            | X X        |       |
|                               | 2. To what extent is the project's design realistic and appropriate to achieve objectives on time?   |                           | X X<br>X        | X X<br>X X | X          |       |
|                               | 3. To what extent has the project responded to changes in NIS' or stakeholders' needs/environment/country context?   | X X X                     | X               | X          | X X        | X     |
|                               | 4. To what extent do the AB ToR meet my own expectations and priorities?   |                           | X X<br>X X      |            |            | X X X |
|                               | 5. To what extent do AB meetings meet my own expectations, interests and priorities?   |                           | X X<br>X X      |            | X X<br>X   |       |
| <b>Coherence/Cooperation</b>  | 6. To what extent did AB members work towards one joint goal: "NIS offers food service sector clients additional metrological services"?                       |                           | X X<br>X X<br>X | X X        | X          |       |
|                               | 7. To what extent was the private sector contributing to the networking component?   |                           | X X<br>X X      | X X<br>X   |            | X     |
|                               | 8. To what extent did NIS contribute with necessary resources (e.g. backstopping, political support, decision-making, accelerating processes, etc.) as agreed? |                           | X X<br>X X      | X X        | X          |       |
|                               | 9. To what extent did the project make achievements?   |                           | X X<br>X X      |            | X          | X X   |
| <b>Effectiveness/Steering</b> | 10. To what extent did the project take and use AB recommendations?  | X X X<br>X                | X               | X          | X          |       |
|                               | 11. To what extent did the project experience delays?  | X X                       | X X<br>X        |            | X X<br>X X |       |

|                                 |   |     |          |   |  |   |
|---------------------------------|---|-----|----------|---|--|---|
| <b>Sustainability//Learning</b> | 12.To what extent has the project contributed to the capacity of AB members to continue offering additional services to private and public customers? | X X | X X<br>X | X |  | X |
|---------------------------------|---|-----|----------|---|--|---|

| STRENGTHS/ACHIEVEMENTS  | QUESTIONS    | CRITERIA                                   |
|---|--------------|--|
| 1- CRMs are essential for the accreditation of testing laboratories. EGAC, for example, aims to accredit RMPs according to ISO 17043 and is preparing for recognition by EA, AFRAC.   | Q1           | Relevance                                  |
| 2- CRMs are needed for ISO 17025, internal quality assurance, equipment calibration, and method validation. CRMs are needed for PT provision in Egypt.  |              |  |
| 3- AB meetings offer fruitful discussions and dialogue opportunities between stakeholders.  | Q4/Q5/Q6/Q7  | Effectiveness                              |
| 4- Networking + technical training.   | Q9           |  |
| 5- Purchasing the required equipment is a project achievement.  |              |  |
| CHALLENGES/WEAKNESSES   |              |  |
| 1- High cost for the purchasing of CRMs.  | Q1           | Relevance                                  |
| 2- Active Standards (isotope labeled) are in high demand in Egypt and not nationally produced, while there are many producers of incurred reference materials in the region. NIS should go step by step in producing CRMs and produce isotope labeled standards due to the high demand. |              |  |
| 3- Project did not have activities for food safety.   | Q2           | Effectiveness/<br>Steering/<br>Cooperation |
| 4- Project design is very ambitious. Objectives are too broad/ not specific.  |              |  |
| 5- Project didn't discuss scope of accreditation to define CRM demand.  |              |  |
| 6- There are no reference laboratories in Egypt + Arab countries, and awareness raising is required.  |              |  |
| 7- The project did not map all government entities related to their ISO 17025 and ISO 17043 accreditation to avoid duplication  |              |  |
| 8- The project did not create continuous dialogue with PS to understand changing needs.   | Q7           |  |
| 9- The project has slow response to changes in the food safety system legislations in NFSA for accreditation of exporters.  | Q3           |  |
| 10- Customs time and process was not calculated in the design and planning of project activities in the OP.   |              |  |
| 11- Many AB stakeholders are not aware of the AB ToR.   | Q4/Q5/Q6/Q10 |  |
| 12- In some AB meetings, important members did not attend./ Attendance rate in some AB meetings is low during the discussion of important topics.   |              |  |

|  |                  |                             |
|--|------------------|-----------------------------|
| 13- AB meetings focused on discussions rather than decision-making (e.g. discussion of planned actions rather than the identification of activities).                                    | Q4/Q5/Q6/Q10     |                             |
| 14- NIS did not include some stakeholders in training + decision-making process. PTB did not offer enough CB for some stakeholders (e.g. test standardisation, ISO 17028, test methods). | Q8               |                             |
| 15- Project did not conduct technical assessment of CRMs, PTs at stakeholder level in detail (e.g. capabilities of labs of stakeholders).  | Q9               |                             |
| 16- Some stakeholders did not participate in the needs-assessment.   | Q9               |                             |
| 17- Benefits + achievements of the project are more visible in the next phase.   | Q9               |                             |
| 18- NIS capacities are not enhanced enough to continue offering additional services.   | Q11              | Sustainability/<br>Learning |
| <b>LESSONS LEARNT AND RECOMMENDATIONS</b>  | <b>QUESTIONS</b> | <b>CRITERIA</b>             |
| 1- Define in next phase very specific objectives with clear steps and activities with specific indicators.   | Q2               | Relevance                   |
| 2- Include in next phase, as a project activity, the reviewing of Egypt's legislations with regard to QI, to avoid non-achievement.  |                  |                             |
| 3- Raise awareness on the importance and definition of reference laboratories in specific areas of testing and test requirements.  |                  |                             |
| 4- General Organisation for Export and Import Control could be a potential stakeholder in the AB in the next phase.  |                  |                             |
| 5- Digitally map government entities + PS (SMEs) working in calibration field to avoid duplication of efforts and to save money.   | Q7               | Cooperation<br>Coherence    |
| 6- Open dialogue channel with more PS companies, especially those with large variety of products, to understand their needs, as their needs are constantly changing.                     |                  |                             |
| 7- Specify in the contract with equipment supplier the responsibility of clearing customs.   | Q11/9            | Sustainability              |
| 8- NIS should have an official agreement with the concerned entity in customs to give priority for clearance of equipment.   | Q8               | Cooperation/<br>Coherence   |
| 9- Create benefits/opportunities for stakeholders to keep them engaged, especially in training, decision-making, and OP meetings.  |                  |                             |

Annex V: Interviewees List<sup>17</sup>

| Date                  | Number of Respondents                    | Institutions  | Methodology   |
|-----------------------|--|---|---|
| January 06 - 08, 2025 | <b>1 Person</b><br><b>(1 female)</b>     | <b>PTB</b><br>-Head of Section Q.34<br>-Former Project Coordinator  | Virtual individual interviews                                   |
| January 12-20, 2025   | <b>36 Persons</b><br><b>(17 females)</b> | <b>NIS</b><br>-President<br>-Vice President and Head of International Affairs<br>-Assistant Researcher Time and Frequency, Quality Manager of PT Unit<br>-Assistant Research / Inorganic, Electro Chemistry<br>-Vice Chair of Technical Committee-Acoustic / Technical Manager of PT Unit<br>-Head of Bioanalysis Laboratories<br>-Assistant Researcher at Gas analysis and Fire Safety Lab<br>-Chemist at Bioanalysis Lab<br>-Assistant Researcher Bioanalysis lab<br>-Associate Professor – Organic and Protein Analysis Laboratory<br>-Researcher- Organic and Protein Analysis Laboratory<br>-Professor – Material Testing and Chemical Surface Analysis Laboratory<br>-Professor Inorganic analysis and Electrochemistry Laboratory<br><b>Wadi Group</b><br>-Health, Safety and Environment Manager<br><b>QCAP</b><br>-Lab Director<br>-Scientific Technical Advisor | Group and individual interviews, Evaluation Assessment workshop |

<sup>17</sup> Including participants of assessment workshop

|       |                            |  |  |
|-------|----------------------------|--|--|
|       |                            | <p>-German Embassy</p> <p>-Head Of Development Cooperation at German Embassy Cairo</p> <p><b>GIZ</b></p> <p>-Head of Private Sector Development Programme</p> <p>-Advisor for Private Sector Development Programme</p> <p>-Head of Agricultural Innovation Project</p> <p>-Head of Climate Resilience Component of Agricultural Innovation Project</p> <p><b>EGAC</b></p> <p>-Accreditation Director</p> <p>General Organisation for Import &amp; Export Control (<b>GOIEC</b>)</p> <p>-General manager of testing labs</p> <p><b>Hemaity NGO</b></p> <p>-Chairman</p> <p>Food and Agro-Industries Technology Centre (<b>FAITC</b>)</p> <p>-Executive and Deputy Executive Manager</p> <p>Industrial Modernisation Centre (<b>IMC</b>)</p> <p>-Green Economy programme manager &amp; industrial development programs</p> <p><b>PTB</b></p> <p>Project Coordinator</p> <p>- Intermittent Short-Term Expert (iKZE), M&amp;E expert</p> <p>-local consultant</p> <p>-technical expert</p> |  |
| TOTAL | 38 persons<br>(18 females) |  |  |