Gap Analysis of the National Quality Infrastructure of Côte d'Ivoire

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Acronyms

AGEDI	Agency for the Management and Development of Industrial Infrastructures
BIM	Office of Measuring Instruments
BIPM	International Bureau of Weights and Measures
CAB	Conformity Assessment Body
CACDI	Agrifood Competitiveness and Industrial Development Support Center
CCI	Chamber of Commerce and Industry
CDI	Côte d'Ivoire
CIN	Ivorian Committee for Standardization
CINR	Centre d'information sur les Normes et la Réglementation
CIPM	International Committee for Weights and Measures of the BIPM
CNLC	National Committee to Combat Counterfeiting
CSB	Companion Standardization Body
DPQN	Directorate for Promotion and Quality and Standardization
DSV	Department of Veterinary Services
ECOQUAL	ECOWAS Quality Policy
ECOWAS	Economic Community of West African States
EPA	Economic Partnership Agreement
EPN	National Public Establishments
ETSI	European Telecommunications Standards Institute
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
ITU	International Telecommunication Union
LANADA	National Laboratory for Support to Agricultural Development
LANEMA	National Laboratory for Quality Testing, Metrology and Analysis
LNM	National Metrology Laboratory
LNSP	National Laboratory of Public Health
NQI	National Quality Infrastructure
NQP	National Quality Policy
NSB	National Standards Bureau
OEC	Organisme d'Evaluation de la Conformité
OIML	International Organization of Legal Metrology
QMS	Quality Management System
PAQI	Pan African Quality Infrastructure
REC	Regional Economic Community
SICOSAV	Health and Veterinary Inspection and Control Service
SMEs	Small and Medium-sized Enterprises
SOAC	West African Accreditation System
SPS	Sanitary and Phytosanitary Measures
TRs	Technical Regulations
VOC	Verification of Conformity
WAEMU (UEMOA)	West-African Economic and Monetary Union
WTO-TBT	World Trade Organization - Technical Barriers to Trade

Executive Summary

A national quality infrastructure (NQI) includes the institutions and frameworks for standards, metrology, accreditation, and conformity assessment. Together, these components help to promote high quality and safe products and services in a country. This system helps public and private institutions establish standards that will be recognized internationally, as well as perform conformity assessments and accreditation services. A well-defined and predictable NQI supports market confidence, decrease the costs of doing business, helps facilitate trade, and expands the scope of investment.

At a regional level, West Africa has developed a Quality Policy, the ECOWAS Regional Quality Policy (ECOQUAL). So far, eight countries in the West African region have adopted their National Quality Policy (NQP), and the eight remaining countries, including Côte d'Ivoire (CDI), have their NQPs already drafted. The final draft is in the process of being transmitted to the Ivorian Government, which should then set up its adoption process with a view to making it a national document.

This NQI gap analysis uncovers weaknesses in regulatory and institutional arrangements that apply CDI's NQI, as well as weaknesses against best NQI practices as a whole system, including matters like structure, coordination, awareness and funding. It identifies differences between what the current state of NQI is in CDI, and where it should stand, in particular according to the most current regulatory and institutional requirements. Any differences are weaknesses requiring remedial actions. As such, this gap analysis lays the groundwork for future supportive intervention. Including, future training opportunities as well as areas that have the most potential for positive impact due to political will or institutional readiness.

Overall Assessment

Based on international experience, there are three main stages in the development of an NQI:

1. Compliance with international trade rules and international recognition.
2. Generating added value to NQI customers.
3. Generating added value to economy and society.

The purpose of an NQI is not only to establish a set of rules to protect citizens against the physical risks of people, property, food borne diseases, or products of harmful or fraudulent origin; but also to promote national production and a more predictable business environment. The NQI concerns all products and services, imported or exported, used, consumed or implemented in all sectors. Therefore, NQI touches every aspect of a society from food and manufactured goods to environmental protection and the management of public authorities including the economy and socio-cultural development as a whole.

Initially, the objective of a NQP will be to convince trading partners that CDI respects and is capable of fulfilling international best practices for trade. The first step in this process is establishing an appropriate legal framework, properly established NQI bodies, an operational NQI system, membership in international organizations, and mutual recognition agreements with these organizations. The level of fulfillment of this stage in CDI is unsatisfactory. The main area for improvement is full membership of international metrology organizations and active participation in the technical committees (especially CIPM[1] consultative committees). CDI should use activities and events of international organizations engaged in quality infrastructure to strengthen its NQI capacity (via transfer of technology and skills), to defend its interests as well as have their interests recognized. Therefore, it should join, participate in, or become member of international organizations for standardization, metrology and accreditation.

[1] Comité International des Poids et Mesures/International Committee for Weights and Measures of the BIPM.

In the **second stage**, the objective is to do things correctly and effectively. This requires comprehensive stakeholder awareness of and appreciation for the benefits of NQI functions. In respect of the second stage, CDI exhibits a number of non-compliances in specific areas:

- measurements are not taken in some areas;
- measurements are not done properly;
- uncertainty is not assessed correctly;
- traceability is not provided fully;
- inter-laboratory comparison and proficiency testing are not undertaken;
- accreditation assessment is not carried out properly or is oversimplified;
- metrological supervision is not carried out by experts in metrology;
- inspection is not done properly or at all;
- inspection is not based on hard data, giving the feeling that it is based on personal judgment rather than on an objective process; and
- paperwork for certification is not complete.

It is not clear such non-compliance is due to a lack of proper procedures or a lack of resources.

The objective of the **third stage** is to go beyond core NQI functions to generate broader benefit to the society and economy especially for in the production of better products. Some examples of such contributions are listed below:

- Raising public awareness in NQI functions, especially in measurement.
- Using measurements in social areas such as management, system development, and performance evaluation.
- Helping to generate better services by convincing process owners to use relevant NQI tools.
- Helping operators to use scientific tools.
- Establishing CDI's innovation system.
- Taking part in techno-parks and incubation centers.
- Contributing to the development of science and technology by providing research infrastructure.
- Establishing partnerships with foreign organizations for the development of new or improved products or services.
- Contributing to product development processes by assisting developers and manufacturers.

Gaps in Concepts, Operations, and Outputs

In CDI, all NQI organizations exist, but their effectiveness is not sufficient for the needs of Ivoirian industries. The organizations of the quality infrastructure should be strengthened; the distribution of their competences must be clear and registered in the recognized international framework. The creation of the West African Accreditation System or Le Système Ouest Africain d'Accréditation (SOAC) as an accreditation body goes in this direction.

Mandatory certification for products is increasingly needed and the benefits generated by this policy should be assessed. In CDI, certification is still too rare. Less than 3% of Ivorian companies are certified.

A notion of "product development support" with active utilization of NQI organizations does not exist. In particular, in product development, the necessary linkages between metrology and technology development are lacking in CDI. Linkages between metrology and the national innovation ecosystem (including industrial R&D) need considerable enhancement. A national innovation policy is not well

developed. It neither covers all sources of innovation (such as using NQI as one of the pillars of innovation) nor is it implemented fully.

Gaps in Legislation and Regulation

Overall, the legal and regulatory framework for the National Quality Infrastructure (NQI) has reached an elaborate level, which currently allows the system to be implemented on solid foundations. The results are already visible and promising; however, they need to be generalized and consolidated. The establishment of a modern and already well-developed legislative mechanism can be credited to the efforts of the Ivorian Government, especially in recent years, resulting in a very extensive legal arsenal, which allows the implementation of the main principles related to quality.

At this stage, the main challenge is the effective implementation of what is provided for in the legislation and regulations. In the perception of public authorities, quality incorporates regulatory safety requirements. Government intervention is necessary, and it must be clearly identifiable. The public authorities must therefore exercise their responsibilities in the legislative and regulatory framework of the quality infrastructure and in the field of application control.

In addition, in part secondary regulations, which should concretize laws, are not in place yet. For example, the Action Plan of the draft National Quality Policy (NQP) of CDI expressly identifies development and adoption of "implementing decrees" for Law 2016-411 of June 15, 2016 (relating to the National Metrology System) as a priority. Another priority action is to strengthen the application of Decrees 2014-460 and 461, and further regulation on the Law 2013-866 on standardization and quality promotion.

There is no technical lead organization in legal metrology. The Office of Instruments and Measures (BIM) responsible for legal metrology still needs to be set up. The same goes for the National Metrology Laboratory (LNM), concerned with industrial and scientific metrology.

Conflict of interest issues are not easily clarified, especially with frequent changes of legislation on different levels of regulators. For example, the Technical Regulations Department's scope of operations is very wide and its powers are broad, while most of the technical regulations stem from the Ministry of Agriculture and the Ministry of Environment. The Technical Regulations Department controls the core NQI service providers and gives the impression of being centralized NQI organization. Added to the national regulatory system are the technical regulations of the two Regional Economic Communities (RECs) of which Côte d'Ivoire is a part, the West African Monetary and Economic Union (WAEMU/UEMOA) and ECOWAS that sometimes cause overlap and increased burdens for businesses.

Gaps in NQI Structure

Administrative and financial autonomy is insufficient, or missing in core NQI service providers (metrology, accreditation, standardization). This makes the impartiality for metrology and accreditation questionable.

Inspection processes for market surveillance operations are not accredited. This raises questions about the technical competence of inspectors. At present, MSBs perform inspections, even though they are not accredited. Inspection requires a specialized set of expertise. Some independent accredited inspection bodies exist, but their role in market surveillance processes is unclear. In addition, the role of personnel certification is not well defined. Existing implementation procedures for discouraging low quality, non-compliant products (including counterfeit products) are insufficient to protect the market. This is an important issue, as self-declaration is increasingly common. Assessment of the impact and effectiveness of CDI's market surveillance system is not carried out.

A priority action of the draft NQP is to train control officers, in particular on new targeting and risk analysis techniques, which serve as a basis for developing control and monitoring programs. This means that currently there is a lack of market surveillance tools such as targeting and risks analysis.

The difference between implementation of local and regional conformity assessment may harm some Ivoirian producers. These producers may be forced to comply with both local and regional set of rules, increasing the cost of the products and reducing competitiveness.[2] Differences in the prioritization of needs in CDI versus prioritization of the WAEMU/UEMOA is a source of concern in the preparation of technical regulations. A list of required conformity assessment processes does not exist. Producers have to spend a lot of time to get this information.

Despite representation in bodies like CODINORM, the private sector plays an insufficient role in the development of standards. Developing standards (voluntary standards) is an activity to be picked up by private sector and the sectors within the business community. Presenting information on a website and inviting comments from industry representatives are necessary, but not sufficient. Even when industry participates, the impact is low due to limitations on expertise in standards development. Interest groups such as manufacturing unions and sector trade associations make an insufficient contribution to the standards development process.

The apparent low level of demand for harmonized standards, particularly in the field of consumer products, may indicate an emphasis on domestic rather than foreign markets.

Stakeholders have low awareness of standardization. In the field of education, awareness and teaching of NQI will help develop market demand for better quality products and services that prioritize health and safety. Consumer awareness of quality is at the heart of any NQI as consumers drive demand for products and services. It appears the main efforts to raise consumer awareness have been led by international donor-funded projects. This may be an area of weakness as awareness building is tied to donor funding making training frequency inconsistent and project, rather than need, based. An example is the support of UNIDO via a broadcast and awareness-raising program, explaining basic functions of the NQI in CDI.

Electronic and physical recordkeeping and maintenance of standards need improvement. Databases should be centralized (actors and driving forces linked to quality) and the various databases should be harmonized in a single location, for the ease of accessibility of data by stakeholders, and break down specific requests wherever it is useful. In Market Surveillance, “alert-networks” through the creation of an IT-tool based on existing Industries databases should be strengthened.

Participation in international inter-laboratory comparisons and entries to CIPM[3]/Mutual Recognition Arrangement and Calibration and Measurement Capability tables are low compared to international best practices. The NQP of CDI recognizes the need to support mutual recognition agreements under the West African Accreditation System (SOAC).

Improvements in conformity assessment are essential to the creation of national associations (or federations) of laboratories, and encouragement of accreditation of conformity assessment bodies (CABs). At the time of publication, there were fewer than ten accredited laboratories in CDI.[4]

[2] A an example, in 2017 the Economic Community of West African States (ECOWAS) constituted a Regional Accreditation System (RAS) and community committees in the areas of metrology, technical regulation, and conformity assessment. To the latter, at the same time, Cote d’Ivoire has its own Verification of Conformity programme for all exports to the country. Source: ECOWAS Develops Regional Accreditation System In Bid To Ensure Quality Infrastructure, Products In West Africa, 11 November 2017, ECOWAS-website: https://www.ecowas.int/.

[3] Comité International des Poids et Mesures/International Committee for Weights and Measures of the BIPM.

[4] For example: the water and environmental chemistry laboratories are accredited ISO 17025 (TUNAC).

Despite the existence of the National Laboratory for Metrology and Quality Analysis Testing (LANEMA), CDI has insufficient metrological supply of services. This forces users to seek long and costly calibration services abroad, which cause significant costs to product quality as well as delays in metrological services. Across CDI, more measurement laboratories are needed for chemical analysis, medical analysis, and metallurgical analysis. Additionally, there is a need for more testing laboratories for products that are in mandatory product testing lists.

Operational effectiveness of accredited bodies could not be easily assessed. While nearly all areas of certification are covered, there is room for improvement in energy management, information security, and personnel certification. More certifications for personnel working in various NQI organizations are needed, especially in Market Surveillance Bodies. The IT infrastructure may not be adequate to keep track of the large number of accredited organizations. Finally, there appear to be an insufficient amount of technical assessors, especially for laboratory accreditation to ensure proper traceability.

The scope of operations (especially in product and service certification bodies), relations with similar bodies in other countries, and relations with international organizations are well known. However, the following characteristics of independent NQI service providers are not assessed and documented:

- Quality of operations
- Impact on economy and society
- Relations with core service providers (metrology, accreditation and standardization)
- Relations with regulating bodies

Gaps in Institutional Development & Decision-Making

There is considerable room for improvement in institutional development in the following areas:

- Long-term planning responsive to national economic forecasts in both NQI institutions and the Technical Regulations Department.
- Assessment of operational effectiveness.
- NQI needs assessment.
- Monitoring and self-assessment of NQI organizations.
- Human resources, staff capacity building and career planning.
- Measurement of the economic and social impact of core NQI service providers.
- Investment planning to prioritize the use of limited resources more effectively.
- Customer feedback and stakeholder expectation monitoring system.
- Knowledge management and project management systems.

The main source of problems in decision-making is the weak institutional development of the key players in the NQI. This institutional development problem is related to the institutional inexperience of core NQI service providers. CDI's NQI organizations are relatively young and need time to develop. Further, the implementation of the NQP implies that multiple entities must act in a harmony, which requires coordination and supervision. This task should be entrusted to a permanent and politically supported institutional leadership structure that identifies the institutions in charge of quality and conformance.

The Directorate for Promotion and Quality and Standardization (DPQN),[5] should be the main body to coordinate the NQP. This role is currently distributed across several institutions and services, but should be more strongly coordinated by a central entity such as the DPQN. The DPQN should become the

[5] The DPQN, Directorate of Promotion of Quality and Standardization, created by Decree 2011-425 under the organization of the Ministry of Industry, is responsible, among other things, for developing, implementing and monitoring the standardization and quality policy.

obligatory point of consultation for any reform of NQI, and must be able to provide its technical expertise in terms of quality in the implementation of public policies.

From an analysis of the (legal and) institutional framework for environmental and social management and impact assessment and management in CDI in 2018, a number of conclusions were drawn on the performance of the government of CDI, which are likely applicable to the NQI-domain:

- most institutions are in place and their mandates have been defined; however, there is a low level of institutional coordination and a lack human and financial resources;
- there is no coordination between the central and regional levels regarding monitoring of implementation of government intervention for environmental and social management and impact assessment and management);
- administrative procedures do not allow for timely nor rapid decision-making;
- the implementation of the Social Protection Strategy needs to be supported to ensure that vulnerable groups are properly taken into account;
- public inquiries are often information sessions and do not result in meaningful public consultation;
- the complaint management system set up by the government is not well known, there is no synergy between this system and those set up by the ministries; and,
- studies are often of poor quality, leading to considerable delays in approval and implementation.

Gaps in Infrastructure and Capacity

In CDI, metrology is the weak link in the NQI, as is the case in most countries. There are serious limitations for metrology due to infrastructure. Scientific metrology centers also need to update existing infrastructure and gather new and higher quality measurement systems in their laboratories.

Knowledge transfer is, and remains, critical. There is a shortage of properly qualified and knowledgeable long-term external consultants, and there is room for the improvement in technical staff's knowledge of measurements at various NQI organizations. Specific capacity areas that need attention include:

- training on the function of market economies;
- knowledge of the operations of NQI organizations and conformity assessment schemes in competitive environments; and
- understanding of what similar organizations in other countries do (and why).

Another high priority area for metrology is the revision of rules for the transportation of equipment to other countries for repairs, calibrations, and comparisons. Further, the number of accredited organizations is not sufficient to fulfill industry needs. This is especially true for product testing laboratories, product certification bodies, and medical laboratories.

Considerable attention is needed in the following areas to capitalize on existing technical capacity:

- facilities infrastructure;
- measurement equipment; and
- IT equipment.

Gaps in Awareness, Expectations, and Perception

As in many nations, CDI suffers from a lack of public awareness for NQI and its functions. This serious problem needs to be remedied as soon as possible. Areas for immediate attention include consumer and political awareness of the value of quality, international best practices, and expectations on market surveillance. This issue can be solved with a single large public awareness campaign, as described below, but this has to be sustained throughout the process.

A lack of stakeholder awareness and low staff exposure to international best practices seem to be common throughout the NQI system. A lack of knowledge of the latest competitive tools or techniques or an insufficient level of research and development, which limits the competitiveness of Ivorian companies on the national, regional, and international markets.

In CDI, the market surveillance system is unnecessarily complex, leading to confusion and dampening opportunities for collaboration across responsible parties. Ivorian market surveillance includes a wide array of actors with varying levels of responsibility and supervision. Several ministries are in charge of control and inspection bodies, which share the responsibilities, missions, and activities of national market surveillance. Even within regulatory bodies, there is confusion about the function of market surveillance and who is responsible for what.

CDI does not utilize Regulatory Impact Assessment in regulatory decision-making. While this is a higher-level initiative for many nations, CDI could benefit from incorporating the foundational components of the regulatory impact assessment process.

Gaps in Coordination

A central authority for NQI should improve coordination and long-term planning. Unfortunately, there is little evidence that coordination and planning are working efficiently through DPQN.

Aside from DPQN, a High Quality Council is active (or, is planned to be active), and CODINORM is assigned to coordinate NQI functions. The creation of a High Quality Council should support effective coordination of NQI in CDI. As part of the conformity assessment of products whose standards are made mandatory, the government has entrusted CODINORM with the technical management of the system for verifying compliance with standards made mandatory (VOC), for products imported, exported and/or manufactured locally and placed on the market (agreement of September 6, 2016). [6]

Updates to the legal framework (in particular Decree 2014-461 of 2014/08/06, relating to the modalities of application of law 2013-866 of December 23, 2013 on standardization and quality promotion) is required to improve NQI coordination. Ideally, these updates would strengthen the powers of the CIN and the DPQN in their "orientation, coordination, monitoring and evaluation of standardization activities." Additionally, a framework for coordination and consultation between ministerial departments involved in the development and application of TRs should be established. Currently, the Ministry of Trade, Industry and SME Promotion oversees TRs in CDI.

Furthermore, the lack of coordination and oversight in the field of market surveillance should be addressed to minimize confusion due to the large amount of actors that are responsible, at different levels and under the supervision of several ministries, for regulatory inspection missions, both for imported products and for those locally produced.

Related to this, but to be regarded as a separate issue, is a lack of coordination between the various inspection bodies and inspection activities, resulting in duplicative inspections for quality and conformity. A framework for consultation/coordination of inspection agencies is required.

As it related to metrology, coordination between the various Metrology Centers is substandard.

Gaps in Funding

In CDI, international donors play a significant role in the development of NQI. This creates a lack of financial autonomy that has potential to harm the NQI organizations, which place an unnecessary burden

[6] CODINORM, together with the Centre d'information sur les Normes et la Réglementation (CINR), is the TBT/SPS Enquiry Point of Cote d'Ivoire.

on the Government budget. A long-term strategy for CDI's NQI is needed in order to make relevant NQI organizations (whether in standardization, metrology or accreditation) financially self-sufficient. Institutions like LANEMA, liaised to the Ministry of Industry, LANADA[7], LNSP[8] and AGEDI[9] are National Public Establishments (EPNs), and as such, dependent on the national budget cycle. There is a serious problem regarding funding new operations and services, such as new measurements, production of reference materials and organization of laboratory inter-comparisons and proficiency testing.

The NQP of CDI identifies finding resources to boost the functioning of the relevant NQI public bodies as a priority so that the directorates, offices, agencies and public committees linked to quality can really carry out their missions effectively. In addition to the need for improved laboratory infrastructure, there seems to insufficient funding for market surveillance.

In order to sustain public awareness processes as well as knowledge transfer, additional funding is needed for a Training and Quality Center to serve the core NQI organizations.

Conclusion

The NQI of CDI has a few firm, positive elements. An NQP is in final draft, and is expected to be adopted soon. The QI legal basis is quite well developed, and the institutions mostly exist. CDI is member of relevant regional (ECOWAS) bodies. However, some regulation is outdated, needs revision or complementary (secondary) regulations. Some institutions, such the field of legal metrology, remain underdeveloped. In addition, as much as CDI is embedded in a strong regional NQI structure, this has the potential to create conflicts of interest, making it more difficult for businesses to comply with the NQI regime. This friction could be assuaged with increased private sector participation in the NQI, in particular during the development of standards. Finally, awareness of the benefits of NQI remains low, which will undermine political will and the current funding structure, makes NQI institutes reliance on government funding. Overall, funding for the NQI remains low.

[7] LANADA, the National Agricultural Development Support Laboratory.
[8] LNSP, Laboratoire National de Santé Publique.
[9] AGEDI, Agency for the Management and Development of Industrial Infrastructures.

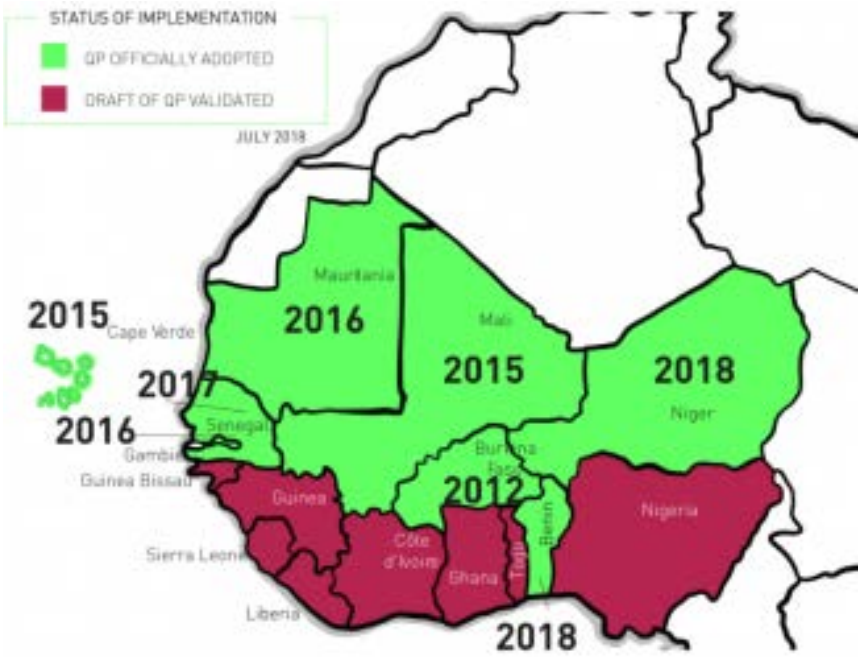
1. Introduction

A national quality infrastructure (NQI) includes the institutions and frameworks for standards, metrology, accreditation, and conformity assessment. Together, these components help to promote high quality and safe products and services in a country. A well-defined and predictable NQI supports market confidence, decrease the costs of doing business, helps facilitate trade, and expands the scope of investment.

The ECOWAS Regional Quality Policy (ECOQUAL)

At a regional level, West Africa has developed a Quality Policy, the ECOWAS Regional Quality Policy (ECOQUAL). All 16 national quality policies (NQP) will be aligned with the regional ECOQUAL adopted by ECOWAS Heads of State and Government in February 2013.[10] So far, eight countries in the West African region have adopted NQPs. The eight remaining countries, including CDI, have already drafted NQPs with the support of ECOWAS and the West Africa Quality System Program (WAQSP) with European Union funding and UNIDO support.

Status of adoption of Quality Policies in West Africa:



The development process of ECOQUAL has six steps for successful implementation at the national level:

1. Formally adopt ECOQUAL as the NQP;
2. Appoint a champion organization for the implementation of the NQP;
3. Set up a National Quality Infrastructure (NQI) coordination mechanism;
4. Revise the institutional and legal framework including the establishment of a fully functional National Standards Bureau (NSB);
5. Sensitize stakeholders on the NQP; and,
6. Explore sources for funding implementation.

[10] Supplementary Act ASIA. 1/02/13 Adopting the ECOWAS Quality Policy (ECOQUAL) and its implementation framework.

National Quality Policy in Côte d'Ivoire

CDI's NQP was adopted on 16 June 2016. The final draft is under review by the Ivorian Government, which, following review and approval, will initiate the adoption process to codify the national policy. The NQP will improve the legal frameworks supporting national quality institutes and facilitate the integration of the Ivorian economy with the economies of other ECOWAS states.

1.1. Objective of the NQI Gap Analysis

The goal of this gap analysis is to identify weaknesses in regulatory and institutional arrangements that apply to the NQI of CDI, as well as weaknesses against best NQI practices as a whole, including structure, coordination, awareness, and funding. It identifies differences between the current state of NQI in CDI and international best practices. The analysis also denotes any weaknesses requiring remedial actions. As such, this gap analysis lays a foundation for future supportive intervention, training opportunities, and areas with the most potential for positive impact due to political will or institutional readiness.

WTO Technical Barriers to Trade (TBT) Guidelines and Best Practice

In essence, a gap analysis on Quality Infrastructure will find its basis in the best practice as depicted in the WTO TBT Agreement. These provisions concerning the preparation, adoption and application of standards are contained in Article 4 of the TBT Agreement as well as Annex 3 or the Code of Good Practice for the Preparation, Adoption and Application of Standards (the "Code of Good Practice").

In addition, Articles 2.4, 2.5, 5.4, and Paragraph F of Annex 3 of the Agreement promote the use of relevant international standards, guides and recommendations as a basis for standards, technical regulations and conformity assessment procedures. Articles 2.6, 5.5 and Paragraph G of Annex 3 emphasize the importance of Members' participation in international standardization activities related to products for which they have adopted or expect to adopt technical regulations. Therefore, this is gap analysis is based on overall adherence to the WTO TBT Agreement and its committee's most recent decisions, which reflect international best practice for QI.

Benefits and Challenges of a Gap Analysis

Gap analyses are a frequently used tool because of the many benefits they can bring to the companies and organizations that implement them. These benefits include the following:

- Insight into regulatory areas that need improvement.
- Insight into institutional and decision-making opportunities for improvements.
- Finding areas of weakness and shortcomings to address.
- Uncovering differences in perception vs. reality, such as whether a regulation actually implemented, or whether an institution only exist 'on paper' and if it still needs to be established.
- Providing information to guide decision makers, which can lead to better decisions.
- Possibility to prioritize needs, and finding the best places to deploy resources and focus energy.

While valuable, gap analyses are not perfect. Some challenges related to the gap analysis process include the following:

- Successful completion depends on knowledge and persistence of the people involved in the process.
- While the process may expose some causes, if it does not go deep enough, the proposed resolutions will not address the real root cause or can miss the complexities behind them.
- The analysis may be subject to inaccuracy over time, as 'the ground is constantly shifting'.

1.2. Technical Approach & Methodology

What is a Gap Analysis?

A gap analysis is a process that compares performance or results with expected or desired outcomes. The method provides a way to identify suboptimal or missing strategies, structures, capabilities, processes, practices, technologies or skills, and then recommends steps that will help the company meet its goals.

By comparing the current state with the target state, in this case, a government can determine what it needs to work on to make their performance or results better and get on the right path quicker. Governments can also use the gap analysis process to prioritize interventions, and look at attributes such as urgency, level of competency, performance level, and productivity.

Gap Analysis Needs a Benchmark

Gap analyses must build from a clear baseline or best practice to assess the deviations from an ideal case. This NQI Gap Analysis references similar analyses of Quality Infrastructure from around the world, to ensure the widest possible range of elements, see Chapter 4. Further, the World Bank QI Toolkit with its Annex: Comprehensive Diagnostic Tool was chosen, due to its comprehensively, as a basis for the overall NQI assessment of table of Annex I. [11]

2. The Current State of the National Quality Infrastructure in Côte d'Ivoire

2.1. List of the Main Relevant Legislation and Regulations

CDI implemented a new legal framework on standardization in 2013. This framework makes explicit reference to the provisions of the WTO Agreement on Technical Barriers to Trade, and to the relevant WAEMU provisions.[12] The current relevant regulatory framework concerning the NQI of CDI consists of the following laws and regulations:

- Regulation 03/2010/CM/WAEMU relating to the Scheme for Harmonization of Activities relating to Accreditation, Certification, Standardization and Metrology in UAEMU;
- Law 2013-865 of December 23, 2013 relates to the fight against counterfeiting and piracy, and the protection of intellectual property rights in import and export operations and marketing of goods and services. This law criminalizes counterfeiting and creates a National Committee to Combat Counterfeiting (CNLC, or NPB);
- Law 2013-866 of 23 December 2013 concerning Standardization and Quality Promotion; and
- Decree 2014-420 of July 9, 2014 establishing the powers, operation and organization of the CNLC (or, NPB);
- Decree 2014-460 of 6 August 2014 relating to the attribution, organization and functioning of the national standardization body, called the Ivorian Committee for Standardization, abbreviated as CIN;
- Decree 2014-461 of 6 August 2014 relating to the application of Law 2013-866 of December 23, 2013 relating to standardization and the promotion of quality;

[11] Ensuring Quality to Gain Access to Global Markets - A Reform Toolkit & Comprehensive Diagnostic Tool - Annex to the QI Toolkit, World Bank, 2019.
[12] Trade Policy Review, Annex 3 – Côte d'Ivoire, WT/TPR/S/362, WTO, September 2017.

- Develop a national regulation on metrology and metrology activities in application of Regulation C/REG.19/12/13 of December 17, 2014 adopting the scheme of the Regional Quality Infrastructure (IRQ) of ECOWAS and the Regulation 08/2014/CM/WAEMU establishing a Metrology System in the WAEMU member states;
- Law 2016-411 of 15 June 2016, concerning with the National Metrology System in CDI;
- Decree 2016-1152 of 28 December 2016, making certain standards of application compulsory;
- Decree 2017-567 of 6 September 2017, approving the concession agreements of the public service for verifying the conformity of products to the CDI;
- CDI Ministerial Order 984 MIS/DGAT/DAG/SDVA on authorization and operation of the West African Accreditation System, 28 September 2018;
- Decree 2019-396 of 8 May 2019 recognizing the public utility of the association called "West African Accreditation System (SOAC);" and
- Operationalisation of the Verification de la Conformite (VOC) program, 11 June 2019.

Food Safety and Quality

Ivorian legal and regulatory texts for standards for food safety and quality are divided into five groups:

1. Legislative texts on the health control of plants and products of plant origin. Most of the decrees are old (1964–1966). Only three decrees affecting coffee and cocoa are newer (1999 and 2000).
2. Texts ensuring the sanitary control of animals and animal products, and their derivatives.
3. Other legislation relating to foods specific to food products not covered by the previous texts.
4. Decentralization process. These texts define the regulatory provisions granting local authorities competences in food safety as part of the decentralization process.
5. Texts of general interest, which have an impact on food safety such as the decree on ionizing radiation and the law on the repression of false or misleading advertising.

Across these texts, there is a basic national legislative and regulatory framework covering aspects of primary production, formal and informal processing, and distribution, sales and catering. However, there remains a lack of capacity to ensure food safety, low sensitivity to quality issues, obsolete legislation and regulations, weak enforcement mechanisms, limited private-public exchanges, a multiplicity of structures intervening at the institutional level and a lack of coordination and communication within the organizations involved. Moreover, Ivorian standards, legislation and regulations do not take in account the aspects of responsibility, traceability, transparency, emergencies (food crises) and prevention. The application of this legislation may lead to inadequate protection of the Ivorian consumer against fraudulent practices and the importation of contaminated food products.[13]

National Quality Policy on the Regulatory Framework

The establishment of a modern and already well-developed legislative mechanism is a credit to the efforts of the Ivorian Government in recent years. CDI has developed an extensive legal arsenal, which will facilitate the implementation of the main quality principles. Some application decrees are still missing

[13] The success story of the implementation of the national food safety agency in Ivory Coast, Egyptian Journal of Basic and Applied Sciences, Volume 4, Issue 4, December 2017.

with regard to the law on metrology, but the principle challenge is the effective implementation of the legislation and regulations.

The legislation and regulations relating to industry in CDI are based on Law No. 2013-866 of December 23, 2013 on Standardization and Promotion of Quality. This Law sets the legal framework for the quality management system in accordance with Regulation No. 03/2010/CM/WAEMU of June 21, 2010 relating to the harmonization scheme of accreditation, certification, standardization and metrology activities in the WAEMU. The law defines and provides a status to the systems responsible for quality, standardization, and related activities. It promotes the principles of the NQP and ensures compliance with standards, particularly in public procurement. Additionally, the law provides support for private sector companies.

The NQP contributes to the overall objectives of the Government's broader economic development program. The NQP also relates to sustainable development, the strengthening of security and well-being of populations, the protection of consumers of products and users of public or private services, improvement of the health of populations, facilitation of internal and external trade, and development of international cooperation in the area of trade. In addition, it created the national standardization body, called the Ivorian Committee for Standardization (CIN).

Several decrees that define the organizational system responsible for the implementation of quality flow from Law No. 2013-866, for example:

- Decree 2014-460 of 6 August 1014 concerning allocation, organization and functioning of the national standards body, CIN.
- Decree 2014-461 of August 6, 2014 on rules of application of Law 2013-866 of 23 December 2013 on standardization and promotion of quality, which specifies the rules for the elaboration and 'approval of standards, the status of standards, the assessment of compliance with standards, bodies for assessment of compliance with standards and their accreditation, and the terms and conditions of application of the administrative penalties provided. The functions of the concession structure are performed by CODINORM until the signing of the agreement provided for by Decree 2014-460.
- Decree 2016-1152 of 28 December 2016 making certain mandatory standards on a collection of products with health risks or safety. It has two main objectives, (i) serve the competitiveness of businesses, (ii) integrate best practices on which users agree. The products whose standards are made mandatory are, inter alia, food products (human and animal food, prepackaged and bulk products, frozen products, dry and canned products); electrical, electronic or renewable energy products; packaging; other health, safety and environmental products; textiles; used products. With regard to food products (meat, fish, crustaceans, molluscs or other aquatic invertebrates; beef, pork, poultry meat and offal, other meat and offal; sugars and sweets; cocoa and preparations; dairy products; cereal-based flours; vegetables and fruits; beverages), standards should be applied in accordance with the International Code of Practice for Good Food Hygienic Practice (Codex Alimentarius). This decree is being modified to harmonize these standards with those provided under the conformity verification program for imported products. Thus, the decree concerns 27 families of products instead of 14.

Other orders are being prepared and awaiting validation.

Decree 2014-460 stipulates, in Article 10, that the State may concede the exercise of the activities of the CIN to any structure it deems competent through an agreement. Thus, the State signed an agreement recognizing CODINORM as a concessionary structure for standards. Article 12 of the same decree indicates that the activities conceded to the concessionary structure are monitored and controlled by the CIN and by the Ministry of Industry through audit and the analysis of mandatory annual reports by CODINORM.

Article 14 specifies that the standardization offices are approved by joint decree of the Minister of Industry and the technical Minister concerned, after consulting the CIN. In addition, the procedure for approving standardization offices is determined by order of the Minister in charge of Industry.

With regard to Decree 2014-461, the orders resulting therefrom apply to:

- Article 12, the derogation from the standards made mandatory is addressed by joint decree of the Minister responsible for industry and the Minister concerned;
- the procedure for examining requests for exemptions, is specified by order of the Minister of Industry;
- Article 29, authorization to exercise an activity must be obtained conformity to standards by order of the relevant Technical Minister, before it may be exercised in any Ivorian territory.

Finally, concerning Decree 2016-1152, a decree relating to the control of product conformity, is awaiting validation. This decree will designate the actors in this control and specify conformance methods.

As an improvement to the legislative system, the market surveillance approach could be supported by proposing a law requiring greater responsibility on the part of the manufacturer and supplier, which would lighten the control system.

The technical regulations (of which the compulsory application standards are a part) are intended to ensure public safety and health, the protection and health of flora and fauna, the protection of the environment and the protection of consumers against fraudulent practices. Technical regulations are drafted and managed by the competent public authorities. These must take account of national specificities as well as the requirements of the WTO TBT Agreement and the regional trade protocol. As such, they must not constitute an obstacle to trade.

Latest arrival, Law No. 2016-411 of June 15, 2016 relating to the National Metrology System defines the general principles of the National Metrology Policy in CDI to support national development objectives. It concerns legal, industrial, and scientific metrology. It defines the legal metrological control scheme and sets the assessment requirements of measuring instruments. The law creates the national metrology structures (national LNM laboratory and office of BIM measuring instruments), and fixes the penal provisions for their violation (penalties, fines, taxes, fees, procedures).

This law must now give rise to decrees and implementing orders to be genuinely implemented (in particular appointment of the LNM and the BIM, missions and modes of operation, delegation to verification of public or private organizations).

2.2. Standardization

Standardization is an activity of general interest contributing to sustainable economic development and innovation. Standards are essential for the quality of products and services. They stimulate industrialization, research and development, free and healthy competition, and serve to facilitate trade. They create common expectations for regulatory compliance and increase market access opportunities for SMEs. Standards also serve as a basis for many technical regulations.

Standardization itself is far more than standards development; it also contributes to establishing the credibility of products and services through the development of recognized measurement protocols. It has a competitive advantage for companies that actively participate in standardization work, which are able to adapt to market demands and new technologies and to benefit from a reduction in research risks and development costs through knowledge transfer.

It is imperative to properly position CDI to overcome the challenges to standardization through the development of a standardization strategy, which is integrated into the National Quality Strategy. Standardization must be carried out with regard to the added value they bring to the challenges of the country's economic development, and therefore with regard to the strategic interest they present for the State and economic actors.

The quality and efficiency of the system must, be evaluated on this dimension, and not merely on the volume of standards produced. A robust standardization strategy aims to position developed standards and the standardization process to take into account the expectations of users, both current and potential. It identifies two main challenges: a proximity issue (for businesses, to ensure the simplicity and practical use of standards) and an international influence issue (to support the competitiveness of the sectors and the performance of the Ivorian economy, optimizing the cycle of innovation in international standards, offering tools to allow Ivorian actors to pre-position their interests).

Benefits and challenges of standardization:

BÉNÉFICIAIRES	ENJEUX	AVANTAGES
ENTREPRISES	Les Normes internationales sont des outils stratégiques et des lignes directrices destinés à aider les entreprises à relever les défis les plus urgents pour l'économie moderne. Elles garantissent l'efficacité optimale des opérations commerciales, augmentent la productivité et aident les entreprises à accéder à de nouveaux marchés.	• Economies de coûts ; • Renforcement de la satisfaction clientèle ; • Accès à de nouveaux marchés ; • Augmentation des parts de marché ; • Avantages environnementaux.
GOUVERNEMENTS	Les gouvernements nationaux peuvent utiliser des normes pour étayer des politiques publiques, en citant celles-ci en référence dans la réglementation.	• Avis d'expert – Les normes sont élaborées par des experts. L'incorporation d'une norme internationale dans la réglementation nationale, par les gouvernements bénéficient de l'avis d'experts sans devoir directement faire appel à leurs services ; • Ouverture des marchés mondiaux – Les normes internationales sont adoptées par de nombreux gouvernements, leur incorporation dans la réglementation nationale par les gouvernements contribue à uniformiser les exigences en matière d'importations et d'exportations dans le monde entier, ce qui facilite la circulation des marchandises, des services et des technologies d'un pays à l'autre.
CONSOMMATEURS	La concurrence est exacerbée. Le client a maintenant un grand choix et peut sélectionner les fournisseurs qui seront les plus fiables en termes de performance du produit, coût, et délais.	• La qualité et la fiabilité ; • La régularité dans la prestation des services ; • Le choix et la concurrence équitable ; • La transparence de l'information sur les produits ; • L'adaptation des produits aux populations vulnérables ; • La crédibilité des normes à appuyer les lois de protection des consommateurs.

CODINORM

Côte d'Ivoire Normalisation (CODINORM) is an association created on September 24, 1992 by the private sector and including State representatives, comprised 237 enterprises as of January 2021. CODINORM is a non-profit association that is supported by a government budget. CODINORM had 185 private company members at the end 2017 and is linked to the State by an agreement, which defines its management methods. As such, CODINORM is the technical concession structure for standardization activities under the control of CIN. In 2019, CODINORM issued an Action Plan and, in early 2020, a two-year Standards Strategy, which are both published on its website.[14]

CODINORM's technical activities are carried out by a permanent operational structure of 25 members, of whom eight are engineers or similar. It is supervised by CIN. In CDI, standards may be made binding (technical regulations) by decree, after endorsement by the CIN. In May 2017, CDI had 2,000 such

[14] Plan d'Actions Issu du Plan Stratégique 2020-2022, CODINORM, and Strategie Ivoirienne de Normalisation (2019-2021), CODINORM.

standards and 132 technical regulations, covering 14 families of products. An updated list has recently been published on the CODINORM website.[15]

CDI has not submitted any TBT notifications to the WTO since 2012. CODINORM provides NI (Ivorian standard) certifications, which are valid for three years, and conformity tests (valid one to three months). However, compliance with the standards, and more particularly the technical regulations, is not fully functioning. In 2015, only 150 of the more than 5,000 enterprises in the Trade Register had utilized conformity testing and quality control. This undermines enterprises' capacity to meet the requirements of international markets.

CODINORM represents CDI in regional and international standardization bodies, and acts as the national enquiry point for TBT to the WTO. CODINORM's stated objective is the widespread adoption of international standards and technical regulations, and the acceptance of conformity tests carried out and conformity certificates issued by accredited bodies, as long as the standards and regulations in question have been deemed equivalent to those in force in CDI. According to WTO reports, an office of the West African Accreditation System (SOAC), the ECOWAS regional accreditation body, is currently being established in CDI.[16]

Governing Standardization

Law 2013-866, governs standardization and the promotion of quality in CDI. The application of Law 2013-866 is defined by and Decree No. 2014-461. Decree 2014-460 establishes CIN as the National Organization for Standardization (ONN) and determines its organization and function. As described in Article 10 of Law 2013-866, the mission of CIN is to contribute to the implementation of the national quality policy. It is responsible for ensuring the application of mandatory standards (technical regulations); giving opinions on the approval of the Standardization Bureau; supervising with relevant ministries the execution of the missions promoting quality, certification, accreditation and evaluation of conformity to standards; and proposing to the ministers concerned the administrative sanctions for offenses of existing quality laws.

The private sector has been integrated into CIN to take support efficiency of standardization and respect the essential role of the private sector in production and marketing operations. The DPQN, Directorate of Promotion of Quality and Standardization, created by Decree 2011-425 is responsible for developing, implementing, and monitoring the standardization and quality policy, and implementing and monitoring the activities of CIN.

Standardization accomplishes an extremely important task by focusing its efforts on the priority axes of development identified by the Government as those where CDI can have a competitive advantage:

- Agro-industry (oil palm, cashew, cotton-textile, cocoa, rubber, fruits and vegetables, etc.),
- Non-agricultural natural resources (mines, oil, gas),
- Structuring industries (metallurgy, steelworks, cement, chemicals, etc.),
- Consumer products (textiles, packaging, generic medicine, etc.),
- Light manufacturing industries (assembly, assembly, equipment, etc.).

CODINORM's efforts on this point are to be welcomed, especially efforts to involve public authorities, companies, professional associations and laboratories in the process of developing standards. However,

[15] Programme Triennal de Normalisation 2019- 2021, CODINORM.
[16] Trade Policy Review, Annex 3 – Côte d'Ivoire, WT/TPR/S/362, WTO, September 2017.

the steering of the standardization system must also take into account the preponderant dimension of international standardization work, carried out within various international standards bodies.

In the spirit of medium- to long-term convergence with the marketing methods adopted by the countries with which CDI maintains close commercial relations, it is necessary to identify, transcribe, and adopt/adapt relevant international standards for the sectors identified as priorities by CDI.

The State has entrusted CODINORM with the technical management of conformity assessment to technical regulations (VOC), for products imported, exported and/or manufactured locally and placed on the market (Agreement of September 6, 2016).

Funding for standardization work is mainly provided by economic players through payments for access to standardization commissions and sale of standards, as well as the State subsidy. By way of comparison, in Europe, standards are funded 90% by industry, 8% by national organizations and 2% by the EU, which makes a financial contribution to standardization work (via CEN, CENELEC, and ETSI).

National Inter-Institutional Advisory Committee on WTO Agreements

In February 2015, CDI officially established the National Inter-Institutional Advisory Committee on WTO Agreements (CNIC-OMC) by decree.[17] This committee is responsible for coordinating the implementation of WTO agreements, as well as all multilateral matters related to international trade. CNIC-OMC is comprised of representatives of government and parastatal agencies, the private sector, and civil society working on international trade matters. The committee meets every three months or as the need arises. The CNIC-OMC also contains subcommittees for matters that may be specific to an agreement or topic area, such as the SPS/TBT subcommittee, which meets every two months, or at the request of the Chair.

2.3. Technical Regulations

A technical regulation is a document that describes the compulsory set of characteristics of a product or the processes and production methods relating to a product or service, including the administrative provisions, which apply to it. Technical regulations can deal, in whole or in part, with terminology, symbols, packaging, marking, or labeling for a given product, service, process, or production method.

The application of technical regulations are generally aimed at issues of immediate national interest, such as the protection of consumer health and safety or the protection of the environment. Technical regulations can also be used to stem bad business practices. Therefore, the development and application of technical regulations must be completed in a coordinated and harmonized manner.

In CDI, technical regulations consist of legal texts, ordinances, and codes initiated by ministerial departments, as well as by decrees, decisions, and orders. A few Ivorian examples include:

- Law 63-301 of June 26, 1963 on the Suppression of Fraud in the Sale of Goods and the Falsification of Food and Agricultural Products,
- Law 63-323 of July 25, 1963 relating to animal health police in CDI and its implementing Decree 63-328 of July 29, 1963,
- Law 64-490 of December 21, 1964 relating to the protection of plants, and Decree 63-457 of November 7, 1963 fixing the conditions of introduction and export of plants and materials likely to transport organisms dangerous for the cultures,

[17] See Article 6 of Decree No. 2015-115 of 25 February 2015.

- Law 78-633 of July 28, 1978 relating to competition, prices, prosecution and repression of breaches of economic legislation, and their various implementing decrees,
- Law 86-478 of July 1, 1986 relating to fishing,
- Law 96-563 of July 25, 1996 relating to the sanitary and qualitative inspection of the animal foodstuffs and animal origin, and the application of its Decree 99-447 of July 7, 1999,
- Law 96-766 of October 3, 1996 on the Environment Code,
- Law 98-755 of December 23, 1998 on the Water Code,
- Law 2016-411 of June 15, 2016 relating to the national metrology system in CDI,
- Codex Alimentarius and standards of the International Organization of Epizootics (OIE), etc.
- To the national regulatory system are added the regulations of the two Regional Economic Communities (RECs) of which CDI is a part, namely WAEMU and ECOWAS:
  - WAEMU, Regulation 007/2007/CM /WAEMU relating to the health safety of plants, animals and food in the WAEMU area,
  - ECOWAS: Regulation C/REG.3/05/2008 of May 18, 2008 harmonizing the rules governing the quality control, certification and marketing of plant seeds (import and export of seeds) in the ECOWAS region, and Regulation C/REG.21/11/10 of November 26, 2010 harmonizing the structural framework and operational rules in matters of plant, animal and food safety in the ECOWAS region.

2.4. Certification

Certification is a procedure by which a third body, the certifying body, gives written assurance that an organization, process, person, product, or service complies with requirements specified in a standard. Certification is a voluntary act that gives companies a competitive advantage. Certification is a competitive tool that builds trust with consumers.

The certification of management systems demonstrates compliance in terms of quality, safety, or environmental protection with the corresponding standards. Thus, unlike product or service certifications, management system certification concerns the structure of a company and its organization rather than characteristics of the products or services offered.

Certification, even if it remains a voluntary activity, brings many advantages:

- An additional guarantee of confidence;
- A competitive advantage for the company that demonstrates quality; and
- A way for regulators to ensure minimum health, safety, and environmental requirements

In CDI, certification is supported by numerous Ivorian or international organizations, based on free competition. The main certification bodies include:

- Bureau Normes Audit –A company incorporated under Ivorian law with 16 years of experience in quality management and certification. It holds accreditations for ISO 17065: 2012 for the certification of agricultural products and ISO 17021-1: 2015 for the management system certification;
- AFAQ AFNOR CI – An organization present throughout West Africa and a subsidiary of AFNOR (French Association for Standardization). It offers quality training and certification audits;

- SGS (Societe Generale de Surveillance) – A company that offers services in the fields of control, verification, analysis, and certification;
- Bureau Veritas – A company that offers services covering inspection, audit, tests, and analyzes;

In CDI, however, certification is rare relative to developed nations. In February 2020, the CEO of Qualitas Côte d'Ivoire announced that less than 3% of Ivorian companies were certified. This figure makes clear that certification is of interest to too few companies in CDI.

Efforts have been made (ASPI project 1998-2000, Quality Award, etc.) or are underway (the PARCSI project) to help companies and particularly SMEs to set up certifiable Quality Management Systems (QMS); however, these remain uncommon. The implementation of Decree 2016-1152, which makes certain application standards mandatory, should strongly encourage companies seek certification, if a mechanism is set up so that the issuance of certificates of conformity is less advantageous than issuance of certificates of compliance.

Local companies are certified ISO 9001, ISO 14001, ISO 22000, OHSAS 18001, ISO 27000, etc. by local or foreign certification bodies. In CDI, there are many auditors certified according to various standards, who serve as relays and support for national and international certification bodies.

In addition, product certification in the field of agriculture is booming and constitutes an important component for the development of quality infrastructure in CDI. Several certifications are carried out in the fruit, vegetable, and cocoa sectors. Notably, the GLOBALGAP fruit and vegetable certificates issued in CDI (including mango, coconut, sweet corn, and banana), UTZ, Rain Forest Alliance, and Fair Trade certificates delivered in the cocoa, and sometimes banana and mango, supply chains.

2.5. Accreditation

Accreditation is an attestation by a third-party organization constituting formal recognition of competence of a conformity assessment body, laboratory, inspection body, or inter-laboratory comparison organization to carry out specific conformity assessment activities. A certificate is issued following an evaluation based on internationally recognized requirements that provides a formal demonstration of an organization's competence on specific conformity assessment activities.

There are many advantages to having conformity assessment activities accredited as it:

- Formally recognizes technical skills for conformity assessment. This constitutes a marketing advantage in which accreditation acts as a market passport to be presented with each offer to guarantee the reliability of the reports or certificates to be provided;
- References performances. Accreditation verifies that conformity assessment bodies work meets relevant standards through periodic assessments to confirm best practice;
- Ensures permanent compliance with the regulations in force; and
- Provides recognition of the skills of the accredited conformity assessment body, which reduces technical barriers to trade, and thus promotes the circulation of products and services.

CDI does not have a National Accreditation Body because it is part of the community approach of the WAEMU to adopt the West African System of Accreditation (SOAC) followed by ECOWAS. Article 27 of Decree 2014-461 of August 6, 2014, on the application of Law 2013-866 of December 23, 2013, stipulates that the Organization National d'Accréditation Ivoirien is the regional SOAC accreditation body.

An exception exists for medical biology analysis laboratories whose accreditation is entrusted to the Regional Center for Health Assessment and Accreditation of Sanitary Establishments in Africa (CRESAC), a regional body created in April 2005 with headquarters in Abidjan (Order 184/MSHP/CAB of Oct. 26, 2010).

On October 19, 2016, the Government of CDI adopted a communication in the Council of Ministers designating CDI to house the headquarters of SOAC. SOAC is responsible for:

- managing community policy in matters of accreditation, in strict compliance with international standards but in concert with WAEMU services, member states and private operators;
- accrediting conformity assessment bodies in compliance with international standards in this area, and as such:
  - define the rules and criteria for accreditation;
  - evaluate the conformity assessment bodies requesting accreditation;
  - take decisions regarding accreditation;
  - ensure compliance with the requirements relating to accreditation;
  - have its competence recognized internationally;
  - ensure its impartiality and competence;
  - ensure the quality of technical relations with international organizations such as the IAF and ILAC, and with other partners outside the WAEMU.

2.6. Metrology

Metrology is the science of measurements and is foundational to quality infrastructure. Metrology is used to guarantee the accuracy and reliability of the measurements, whether in commerce, industry, or research. It is used to support, and is often essential to, trade, consumer and environmental protection, energy management, telecommunications, scientific research, and many other sectors.

Metrology is omnipresent; numerous measures influence the quality of our life and our environment. Measuring air pollution, water quality, food safety, controlling technological risks, and assessing product or service conformity require accurate and reliable measurements. Too often incorrect or inaccurate measurements lead to inappropriate decisions, which have significant financial or human consequences.

Despite being the most advanced aspect of NQI, metrology is generally the weak link in national infrastructure. This is certainly the case in CDI. Upgrading the National Metrology System (NMS) is an essential priority of the NQP, because it serves as the foundation of quality by providing accuracy and consistency across systems. Companies, CABs, calibration and verification providers, market surveillance systems, inspection services, and other must calibrate measurement instruments to international quantities to provide a reliable foundation for adherence to standards and technical regulations.

To ensure the functioning and maintenance of an efficient metrological infrastructure, the Ivorian Government approved Law 2016-411 of June 15, 2016 on the NMS. The implementing decrees of the law are being drafted to support the implementation of Decree 2016-1152. This decree will increase the profile of metrology by making select standards and will impose strictly controlled measurement results particularly those linked to international goods.

Sustainability of the metrology system will only develop alongside an efficient technical system for monitoring, servicing, maintaining, repairing, and the destructing equipment, in order to perpetuate long-term technological achievements and to protect the environment. This system can rely on private organizations, which will support the national public structure in its mission.

The National Laboratory for Testing, Quality, Metrology and Analysis (LANEMA) is the public institution in charge of Metrology in CDI and was established June 27, 1985 as a Directorate within the Ministry of Industry. It was designated as the CDI's Official Fraud Repression Laboratory in 1993. The organization retains the following public and private service missions:

- analyzes, quality tests and compliance with standards;
- conducts metrological quality controls of measuring instruments;
- tests electromechanical equipment and technical controls;
- analyzes (microbiology, parasitology) water and agro-industrial products;
- conducts physio-chemical analyses agro-food and industrial products;
- completes analyses water, petroleum products and industrial pollution;
- conducts research, and development;
- provides assistance to manufacturers by offering collective means of Control, Testing and Analysis, as well as Assistance-Consulting and Training; and
- provides maintenance, control, and repair of aircraft.

LANEMA already has nearly 30 years of experience and several recognized skills, including via laboratories, such as the:

- Pressure laboratory designated WAEMU Regional Calibration Laboratory (LER) in 2008: providing calibration and/or verification services for various pressure instruments, including medical tensiometers. Laboratory in process of accreditation according to the ISO/IEC 17025: 2005;
- Volume metrology laboratory for the calibration of laboratory glassware; and
- Temperature metrology laboratory, in the process of accreditation according to ISO/IEC 17025: 2005.

Other actors participate in a private capacity in the metrology system, including:

- PIC CI (Industrial and Commercial Weighing - http://www.picpesage.com): Established in 1989, PIC CI provides weighing, dosing, automating, and measurement for the import, export, distribution, sale, installation, maintenance, and commercial representation of all materials and equipment. It has approval from the Ministry of Commerce to support the ministry's control missions and is in the process of obtaining ISO 9001: 2015 certification, and plans to obtain ISO 17025 accreditation for some of its calibration activities.

- CIM (Compagnie Internationale de Métrologie - http://www.cimetrologie.com): A private, regional metrology institute for calibration and verification activities that are carried out in ISO 17025 accredited laboratories, and via a network of COFRAC/DKD accredited laboratories. Its areas of competence relate to mass, temperature, pressure, dimension, chemicals, electrical, and volume.

- CAPI (African Weighing and Instrumentation Company - http://capi-africa.com) A company specializing in industrial weighing solutions, providing technical solutions and equipment to companies in the industrial, mining, and agricultural sectors. It has been present for more than 30 years at the sub-regional level (CDI, Burkina Faso, Cameroon and Senegal).

2.7. Market Surveillance

Market surveillance is the fundamental tool for the application of product and service safety provisions. It ensures consumer protection from risks linked to the use of industrial products made available on the national market. It also makes it possible to protect the interests of the various economic operators by

bringing together the conditions conducive to fair competition in the local market, by monitoring compliance with market obligations and meting out relevant sanctions.

As such, economic actors are only allowed to sell products that meet the essential market safety requirements as defined in the applicable technical regulations, see Decree 2016-1152.

The market surveillance system is an essential tool for ensuring the functioning of the NQI and constitutes a system for self-improvement. In CDI, the market surveillance system includes many actors with varying responsibilities and under the supervision of several ministries, for regulatory inspection missions, both for imported products and for those locally produced. This creates an overly complicated system where several ministries are in charge of control and inspection bodies and share overlapping missions:

- Ministry of Industry (Decree 2014-460 of August 6, 2016 and Decree 2014-420 of July 9, 2014):
  - CIN is responsible for monitoring the application of standards made mandatory;
  - The National Committee to Combat Counterfeiting and Piracy;
- Ministry of Trade (Decree 2011-399 of November 16, 2011):
  - The Department of Metrology, Fraud Repression and Quality Control is responsible for ensuring the application of regulatory texts relating to metrology and quality (Law 2016-411 of 15 June 2016), the verification and calibration of masses and measuring instruments, assessment of the impact of metrological controls on the behavior of economic actors, Promotion of quality in conjunction with the technical structures concerned, control of product quality, awareness-building for consumers safety, monitoring of product traceability, and observance and suppression of fraud;
- Ministry of Health (Decree 2016-598 of August 03, 2016):
  - Assessment, prevention, and management of health risks linked to the lack of hygiene and unsanitary conditions;
  - Ensuring compliance with health and public hygiene regulations through health police services;
- Ministry of Agriculture (Decree 2016-563 of July 27, 2016):
  - The Plant Protection, Control and Quality Department is responsible for the application of phytosanitary agreements and conventions, inspection of imported/ exported plants and derivatives, quality control and packaging of agricultural products, organization and coordination of health control and inspection as well as the quality of foodstuffs intended for consumption;
  - The General Direction of Productions and Food Security DGPSA;
- Ministry of Animal Resources (Decree 2014-552 of October 1, 2014):
  - The DPE Breeding Productions Department;
  - The Animal Nutrition and Pastoral Area Management Department is responsible for controlling the quality of animal feed;
  - The Department of Veterinary Services ;
  - The Directorate of Aquaculture and Fisheries;
  - The Veterinary Sanitary Inspection and Control Service at the SICOSAV Borders;
- Ministry of Communication (Decree 2017-151 dated 1 March 2017):
  - The Advertising Communication Department is responsible for promotion and development of advertising, validation of advertising by applicants, and monitoring broadcast messages;

- Ministry of Petroleum, Energy and Renewable Energy Development:
  - The Directorate General of Hydrocarbons is responsible for coordination the exploitation and production of hydrocarbons including supply, refinement, and distribution of petroleum products as well as monitoring and regulating of hydrocarbons;
- Ministry of Budget:
  - The Directorate General of Customs is responsible for enforcing legislative and regulatory provisions regarding the movement of people, goods, means of transport, and capital;
- Other active ministries include the Ministry of the Environment; Ministry of Infrastructure and Housing; Ministry of Transport; and Ministry of Labor.

Control and inspection bodies in CDI face various common difficulties:

- Lack of financial and material resources, especially in equipment and means of transport;
- Staff shortage (number, qualification);
- Lack of coordination between the various inspection activities, resulting in multiple inspections;
- Difficulties in acquiring and maintaining equipment;
- Costs and time to obtain results of analyzes and tests; and
- Lack of ISO 17020 accreditation of inspection bodies.

2.8. Conformity Assessment

Conformity assessment (CA) is the process of determining whether goods, services, systems, processes, and personnel comply with technical regulations or standards. The CA infrastructure contributes significantly to the promotion of sustainable economic development. To this end, it is important that CA results are reliable and easily obtainable, without generating too many additional costs.

The technical and regulatory infrastructure of a country must have certain characteristics before it is possible to derive maximum benefit from standards and CA. An established metrology infrastructure, both in terms of legal and industrial metrology, is of paramount importance.

In the NQI, conformity assessment bodies (CABs) are the organizations responsible for assessing product, service, or process conformance to relevant standards or regulations. The main CABs, public and private, in CDI (this list is non-exhaustive):

- LANEMA is an EPN dependent on the Ministry of Industry. It assumes many missions including the analysis and testing of conformity, metrological controls of measuring instruments, tests of electromechanical equipment, technical controls, physical physicochemical analysis, research and development, assistance and training, maintenance, control and repair of aircraft. The water and environmental chemistry laboratories are accredited ISO 17025 (TUNAC).
- LANADA, National Laboratory for Support to Agricultural Development, is an EPN under technical supervision by the Minister of Agriculture and Rural Development and economic and financial supervision by the Minister of Economy and Finances. It consists of five laboratories, responsible for monitoring animal health, the quality of food products (plant and animal) and seeds. It supports quality for animal and plant production and production conditions.
- LACQUE/ONEP, Laboratory for Analysis and Control of Water Quality of the National Office of Drinking Water, is an ENP under the supervision of the Ministry of Economic Infrastructures. It is responsible

for monitoring groundwater, surface water, and water distribution networks through physico-chemical and microbiological analyses.

- INHP, National Institute of Public Hygiene, is an EPN under the supervision of the Ministry of Health and the Ministry of Economy and Finance. It ensures national health policy related to general hygiene, prophylaxis, and control of transmissible endemics, the national technical directorate of the Expanded Program on Vaccination, teaching and research.
- LNSP, National Laboratory of Public Health, is an EPN that is responsible for the conformity of products intended for consumption (medicines, dietetic products, para-pharmacy products, drinking water, foodstuffs), expert opinions (fraud, industrial, and forensic toxicological), and study of requests for laboratory accreditation of physio-chemical, toxicological, and biological expertise.
- LBTP, Laboratory of Building and Public Works, is under the supervision of the Ministry of Economic Infrastructures, and intervenes in the fields of civil engineering, building, energy savings, industrial control, and safety inspections of low electrical installations voltage. The LBTP has existed since 1954 and in 2005 became a Public Limited Company with Majority Public Financial Participation (SAPFPM). It is ISO 9001 certified and has been the WAEMU reference laboratory since 2007. It is considering ISO 17025 accreditation for certain test activities (concrete).
- LABOGEM, Geotechnics and Materials Laboratory, is a private laboratory specializing in studies and controls of soils and construction materials in civil engineering projects.
- ENVAL, is a private laboratory focused on laboratory analysis (mainly microbiology and physio-chemistry) of the environment, soil and leaves, food, textiles, lubricants, air quality, acoustic and light, and mines. It also offers training and assistance services for certification to ISO 9001, 14001, 22000 and OHSAS standards. Its analysis activities for physicochemical, microbiological, and heavy metals are ISO 17025: 2012 accredited. It is approved by several ministries (Industry, Environment, Animal Resources and Fisheries) and is the ECOWAS reference laboratory for fishery products.
- VAGNY LAB is a private laboratory created in 2005 focused on quality control of foodstuffs (production and distribution), environmental sanitation, marketing of equipment and laboratory products, and agro-food industries. It also trains agents in formal and informal sectors in the agro-food sector.
- LBCA, Bio-Connex Analytical Laboratory, is a private laboratory specialized in microbiological and physio-chemical analysis, hygiene in collective catering, and control of petroleum products.
- Private analysis and testing laboratories such as those of SGS, Bureau Veritas, etc.

At publication, fewer than ten laboratories are accredited due to a range of common difficulties:

- Insufficient qualified technical personnel;
- Difficulties in acquiring and maintaining equipment;
- Lack of local skills for equipment maintenance;
- Lack of accredited national calibration laboratory resulting in high calibration and accreditation costs;
- Cost of obtaining and maintaining accreditation (staff training, cost of equipment, reagents and reference materials); and
- Difficulties in access to accreditation.

The use of CAB services operating in CDI within a regulatory framework is to be encouraged, but it is recommended that the public authorities encourage CABs to attain accreditation. They will thus be

encouraged to seek accreditation not only because it promotes their certificates internationally, but also because it opens up the national market for regulatory CA. This concerns both private and public CABs.

It should be noted that the short-term upgrading of the CABs working on regulated products is a condition for the medium-term upgrading of Ivorian companies and their products.

In CDI, CA procedures for products circulating on the national territory have two components: local controls and export controls. They give rise to the issue of either the NI mark of compliance with Ivorian standards, or a certificate of compliance when production is regularly monitored and controlled by process audits, inspections and checks of product samples.

Concerning imported products, the Council of Ministers adopted on September 6, 2017 a decree approving the public service concession agreements for verifying the conformity (VOC) of products shipped to CDI. The mandate consists of carrying out verifications, inspections, and tests to issue Certificates of Conformity (COC) for products required to comply with regulations prior to shipment. The concessionaires of this VOC program for a period of five years are INTERTEK International Limited, Société Générale de Surveillance (SGS), Bureau Veritas Inspection Valuation Assessment and Control (BIVAC BV), and CÔTECNA Inspection. These companies have inspection teams and CA laboratories across the globe.

This measure aims to "preserve the national market for cross-border smuggling, to ensure the traceability of foreign products placed on the Ivorian market, to guarantee quality consumption to the populations, and to secure local industrial production and fight against unfair competition."

This concerns in particular food, electrical and electronic, chemical, cosmetic and personal hygiene, pharmaceutical, used, packaging, textiles, construction materials, spare parts and accessories for cars and lubricants, machines (accessories for lifting, etc.), pressure equipment, personal protective equipment, gas appliances, shoes, toys, etc.

Regarding food products, the construction of a national food control system is being installed through the creation of an agency dedicated to food safety control (SSA). This agency relies on the general principles of hygiene described in Codex Alimentarius and based on the need for safe food options. The SSA agency must ultimately coordinate all management of sanitary control of food and beverages, excluding water, within the framework of an ISO 17020 accreditation. The final control of the distribution will remain under local authorities, but they will benefit from training and support services from the agency to harmonize procedures and ensure the competence of inspectors.

In general, technical and financial support for the market surveillance system is necessary to make the most of its services and to increase system efficacy and efficiency.

3. Priority Actions Identified in the Draft National Quality Policy[18]

3.1. Improving the Regulatory & Institutional Framework

The foundational elements of CDI's NQI will benefit from clarification on the implementation of key decrees including Decree 2016-1152 of 28 December 2016, making certain mandatory standards, and the audit partner program for product compliance (VOC). The VOC is essential and a priority because it affects almost at all aspects of the NQI including:

[18] Based on: Development of the National Quality Policy and its Implementation Strategy for the Republic of Côte d'Ivoire with a view to emergence by 2020, Ministere de l'Industrie et de Mines, 23 March 2018.

- Market surveillance
  - Map the actors of inspection missions in CDI;
  - Organize and harmonize inspection and proof of compliance missions;
  - Intensify the fight against fraud and counterfeiting (National Committee for the Fight against Counterfeiting NPB, inspection bodies);
  - Encourage conformity assessment bodies (CABs) to obtain accreditation;
  - Calibrate the measuring instruments of the inspection services;
  - Create/strengthen alert networks through an IT tool based on an Industries database; and
  - Strengthen the role of consumer associations and federations.
- Conformity assessment (calibration, analysis and testing laboratories)
  - Encourage the creation of national associations (or federations) of laboratories;
  - Map the CABs in CDI; and
  - Encourage the accreditation of CABs.
- Metrology
  - Set up the National Metrology Laboratory (LNM - industrial and scientific metrology);
  - Set up the Office of Instruments and Measures (BIM - legal metrology);
  - Map the stallions present in CDI;
  - Intensify the training of metrologists; and
  - Train maintenance technicians for measuring devices and complex analysis and testing equipment.
- Accreditation
  - Support the establishment of the West African Accreditation System (SOAC) and mutual recognition agreements;
  - Constitute a body of assessors (system and techniques); and
  - Support the first accreditation operations.

It is important that secondary legislation (decrees and orders) supporting the legislative and regulatory framework for NQI continue to be clarified. An example is the development and implementation of decrees concerning Law 2016-411 of June 15, 2016 on National Metrology System. Others include:

- Standardization
  - Strengthen the application of Decrees 2014-460 and 461.
- Coordination between the public and private sectors
  - Establish a Quality Hub; and
  - Encourage the creation of sectoral technical centers (CACDI).
- Promote quality
  - Prize for quality and excellence: better communication, involving associations and federations;
  - Create an Accreditation Award;
  - Brainstorm other promotion mechanisms;
  - Reinforce the role of quality associations and federations; and
  - Harmonize training programs for quality students.

- Encourage companies to invest in quality
  - Encourage SMEs to use system and product certification;
  - Strengthen the role of industrial associations and federations; and
  - Facilitate access to credit for companies investing in quality.
- Encourage the Administration to adopt quality:
  - Public procurement (by integrate quality clauses in Terms of References); and
  - Encourage the Administration to adopt quality management systems (QMS).
- Boost the functioning of certain public bodies
  - Find resources so that the directorates, offices, agencies and public committees linked to quality can really carry out their missions effectively.

3.2. Management of the Implementation of the National Quality Policy

The implementation of the NQP necessitates collaboration across multiple entities, requiring coordination and supervision. This task should be entrusted to an institutional leadership structure that is permanent and politically supported to recognize institutions in charge of quality and conformity assessment. This structure should be recognized legally and politically to give to ensure its legitimacy. On this basis, it should be charged with supervision of the implementation of the NQP.

The DPQN (Directorate for the Promotion of Quality and Standardization),[19] by virtue of its missions and the length of its commitment to quality, constitutes the ideal candidate. It is experienced, competent, and credible for a mission linked to quality at the national level. The DPQN is a central administration department created in June 2001 retaining the following objectives:

- Promoting a culture of quality in CDI;
- Ensuring institutional quality coordination;
- Serving as the national quality observatory;
- Strengthening the framework for consultation and cooperation between the State and the private sector in the area of quality; and
- Strengthening institutional, financial, and logistical capacities for quality.

The DPQN is responsible for:

- Awareness-building, advisory assistance, and information in the application of standards and the quality approach in all sectors;
- Promoting quality management systems;
- Promoting product certification and the national mark of conformity (NI mark);
- Promoting and monitoring national activities in the areas of accreditation, certification, standardization, and industrial metrology;
- Overseeing quality regulations;
- Surveilling and quality control for regulated products and services; and
- Consolidating the achievements of the WAEMU quality program.

Because coordinate is at the heart of CDI's NQP and is currently distributed across several institutions, the NQP emphasizes that quality should be more strongly coordinated by a central entity such as the DPQN.

[19] DPQN = Direction de la Promotion de la Qualité et de la Normalisation.

On this basis, the DPQN would be responsible for the implementation and the supervision of the NQP. Institutional competence, presence, and authority should cement the scope of responsibilities given to this institutional framework. The DPQN will assume this role in a national context, in addition to the missions, which are already conferred on it by decree. Additionally, the DPQN must become the obligatory point of consultation for any reform of the NQI and must be able to provide technical expertise in terms of quality on the implementation of public policies.

DPQN's current missions should include:

- Encouraging and supporting consumer awareness and quality promotion;
- Encouraging the implementation of collective actions intended for companies, led by actors such as CCIs, CACDIs (to be installed), quality associations, and others;
- Coordinating with CIN and disseminating results to other quality institutes;
- Centralizing databases;
- Supervising the creation and operation of CACDIs (to be installed) and representing the interests of the State on their public missions;
- Giving more visibility to the Quality and Excellence Awards (JNQ) and creating an Accreditation Award;
- Overseeing the installation of SOAC and its implementation.

Boosting the Functioning of Public Bodies

The powers and resources for quality related directions, offices, agencies, and public committees should be redefined in order to effectively exercise their functions. This particularly concerns CIN[20] and the National Committee for the Fight Against Counterfeits (CNLC).[21]

- It seems that CIN has not approved any standard since its inception: the origin of this problem is not known, but it creates an embarrassing and negative situation in an interdepartmental committee. Further, the absence of new standards is detrimental to the functioning of the Quality Infrastructure.
- CNLC aims to reduce counterfeits by 85% in 5 years. The CNLC considers that around 80% of the products sold in CDI are counterfeit, which gives insight into the scope of its responsibility and goals. Given the magnitude of the problem and the obvious lack of resources, it is important to consider prioritizing areas of action based on product-related risk (for example: drugs, electrical components or devices, adulterated alcohol). In addition, a judicial approach using real police investigations to trace the perpetrators of fraud and counterfeiting would likely be more effective than episodic seizures from market resellers.

3.3. Standardization

As it relates to standardization, the following actions should be emphasized:

- Update to the legal framework, in particular Decree 2014-461 of 2014/08/06 on the application of Law 2013-866, to strengthen the powers of CIN and DPQN to support structure of the orientation, coordination, and monitoring and evaluation of standardization activities;

[20] Decree 2014-460 of 06 August 2014 specifies the powers, organization and operation of the CIN. The CIN was installed during a Dissemination Workshop on the competitiveness of the Ivorian manufacturing industry, Friday September 26, 2014. Abidjan, organized by the World Bank.

[21] The National Committee to Combat Counterfeiting (CNLC) is an independent administrative authority, whose mission is to combat counterfeiting and piracy throughout the national territory of CDI. In CDI, counterfeiting being mainly linked to the importation of goods and services, the Government has taken, since December 2013, measures to strengthen the regulatory framework to combat this scourge. This is the adoption of Law 2013-865 of December 23, 2013 on the fight against counterfeiting and piracy, and the protection of intellectual property rights in import and export operations and marketing of goods and services. This law criminalizes counterfeiting and creates a CNLC. Its implementation resulted in the adoption of Decree 2014-420 of July 9, 2014 establishing the powers, operation and organization of the CNLC.

- Strengthen the legal framework for the application of specification standards as well as management standards for public procurement, companies with State participation, companies benefiting from investment code advantages, classified installations, territorial communities, higher education, and health among others;
- Promote national and regional standards approved by businesses and public stakeholders;
- Assist companies in compliance with the standards; and
- Encourage the private sector to participate in standardization activities, nationally and internationally.

3.4. Technical Regulations

- Update legislative and regulatory texts to :
  - Adapt them to the regional and international contexts;
  - Clarify the responsibilities of regulatory and inspection bodies to respect the reality on the ground; and
  - Establish a framework for consultation/coordination of agencies inspection.
- Ensure control and inspection agencies the power, independence, and impartiality essential to accomplish their missions, and provide the resources necessary to fulfill those missions; and
- Engage the control and inspection bodies in a quality approach according to ISO 17020.

3.5. Metrology

Significant and immediate action is needed to:

- Strengthen the legal and industrial metrology system by connecting it to the international system;
- Support industrial metrology in the medium term and scientific metrology in a progressive manner;
- Support the organizations in charge of metrology and encourage investment in these services;
- Create an environment favorable to the development of metrology by informing users and by training metrologists and maintenance agents.

The following activities must be planned to support the above needs:

- Set up the National Metrology Laboratory (LNM), which will be responsible for industrial and scientific metrology: LANEMA is expected to assume this role because it has a long tradition in this field, having installed the first metrology laboratory in CDI at the end of the 90s. LANEMA is in the process of installing its new metrology laboratory on its premises in Abobo-Adjamé, which should be ready in 2018.

  As an NML, it should be helped to develop the following activities:
  - Type or model evaluation of measuring instruments;
  - Initial verification of measuring instruments;
  - Calibration of reference and working standards of the public and private sector;
  - Consulting and training in metrology;
  - National metrological surveillance;
  - Metrological watch; and
  - Representation in international bodies.
- Set up the Office of Instruments and Measures (BIM) which will be responsible for legal metrology;

- Map the stations present in CDI locate them, identify their role(s), and list their status and/or deficiencies vis-à-vis their connection to international sizes;
- Enhance metrology training: little metrology training occurs in CDI, while demand will grow rapidly in the coming years with the promotion of accreditation of CABs as well as the development objectives and priorities of the NQP. There is only one metrology training school in CDI which is located at the National Polytechnic Institute Houphouët Boigny of Yamoussoukro. This institute only provides one course for 25 metrologists from different countries of the WAEMU zone;
- Additional educational institutes are urgently needed, particularly in Abidjan where industry is concentrated and capable of training new metrologists. These institutes should also be able to provide evening courses to improve the skills of active technicians;
- Train technicians responsible for the maintenance of measuring devices and complex analysis and testing equipment: all the laboratories in CDI lack the skills for instrument repair and maintenance. Reliance on foreign labor in this field is expensive when available, which may lead to major immobilizations when machines await repair;
- Develop a national regulation on metrology and metrology activities in application of Regulation C/REG.19/12/13 (adopting the scheme of the Regional Quality Infrastructure of ECOWAS) and the Regulation N° 08/2014/CM/WAEMU (establishing a Metrology System in WAEMU);
- Formally create the National Institute of Metrology and provide it with adequate resources (human, material, and financial);
- Reread the texts relating to the statutes of public laboratories with a view to granting them financial autonomy and flexibility in the acquisition of goods and services and operation;
- Sensitize the population, particularly businesses, to the challenges of metrology;
- Continue to support the LNM to enable it to quickly widen its scope to cover national needs;
- Provide initial and periodic verification/monitoring in accordance with the recommendations of the International Organization of Legal Metrology (OIML); and
- Ensure the traceability of measures at national level.

3.6. Market Surveillance

Efforts will be focused on the following priority actions :

- Intensify the fight against fraud and counterfeiting (National Committee for the Fight against Counterfeiting CNLC, and inspection bodies), because without this the companies playing the game of quality are disadvantaged compared to their unfair competitors;
- Train control officers, in particular on new targeting and risk analysis techniques, which serve as a basis for developing control and monitoring programs;
- List the actors of inspection missions in CDI, to identify the products subject to control, the physical control points, the procedures used, the equipment used by the inspectors, etc. The goal is to get the most out of inspection services, to make them more effective and efficient, to avoid overlaps and to identify possible shortcomings;
- Encourage inspection bodies to set up quality management systems so that they can ultimately be accredited according to ISO 17020 relating to the “requirements in terms of skills of bodies carrying out inspections, as well as in terms of impartiality and consistency of their inspection activities ”;

- Calibrate the inspection service measurement instruments to ensure control of the results of measurements taken following interventions, and make their questioning indisputable, in particular before a court;
- Create and/or reinforce alert networks: an Alert to Obstacles to Trade (AOC) platform was created with the help of the PACIR project. It is an interactive tool, which aims to facilitate the identification and elimination of obstacles to trade encountered by economic operators. This is the kind of tool to create or strengthen, or simply to which Côte d'Ivoire could connect to improve its surveillance system. Many similar tools already exist:
- RAPEX (Rapid Alert System for non-food Consumer Products) designates the European rapid alert system for non-food consumer products. It is an information sharing mechanism which also serves to warn the authorities of member states in the event of "serious risks" posed by certain products which may have been marketed in several EU member states. In addition, it facilitates public access, via the Internet, to information relating to these risks, and guarantees access by consumers, competitors and authorities in other countries of the world to details relating to dangerous products:
  - RASFF (Rapid Alert System for Food and Feed) is the rapid alert system for food and feed. As with RAPEX, notifications come from Member States.
  - ICSMS (Internet-supported Information and Communication System for the pan-European Market Surveillance of technical products) is another European system containing product safety information accessible via the Internet. Unlike RAPEX, which is entirely public, the ICSMS has a protected access area and a public access area.
- Strengthen the role of consumer associations and federations, because they are almost destitute and have very little knowledge of the essential role they must play in the national surveillance system, while they are at the forefront of detecting anomalies and notify the inspection authorities and services. We can plan to structure them, to develop their missions and intervention procedures, to conduct surveys, to formalize the modes and circuits of alerts, and to diversify their own resources.

3.7. Conformity Assessment

Regarding Conformity Assessment Bodies (CABs):

- Map all the OECs (Organisme d'Evaluation de la Conformité) operating in CDI: the aim is to identify the areas of competence available in the country, the OECs accredited or setting up QMS likely to be so, the intervention sectors, the authorizations or approvals obtained (State, international organizations, etc.). Again, the aim is for Côte d'Ivoire to make the most of the CABs present on the ground, to use them to the best of their ability and to promote the best.
- Encourage the creation of national associations (or federations) of laboratories: it seems that none currently exists (this point could be linked to the previous one on mapping). Besides highlighting and enhancement of skills, these associations could establish central purchasing of reagents and products for laboratories, repair federate tasks and maintenance of equipment, set up a network common outsourcing, manage announcements of purchase/resale of used equipment, etc.
- Encourage accreditation of CABs, including those acting for the state and inspection services.
- Supporting accredited laboratories in continuing education and maintaining accreditation.
- Establish procedures for inter-laboratory tests.

- Public laboratories are a particular point in CDI. Each ministry has developed its laboratory, which poses a problem of competition with private laboratories. The status of these establishments is often a problem and does not allow them to be granted real financial autonomy or flexibility in the acquisition of equipment. Their functioning is often hampered by their status because it does not allow enough flexibility for the travel of agents or their remuneration. This results in a continuous flight of employees to the private sector (turnover). An important reflection is therefore to be carried out on the role and the functioning of these public laboratories.
- Update the texts relating to the statutes of public laboratories with a view to granting them financial autonomy and flexibility in the acquisition of goods and services and their operation, and strengthening their capacities by providing them with adequate resources (human, material and financial).

Regarding Inspection bodies:

- Update legislation and regulations to adapt to the new national context, regional and international.
- Update the powers of the various inspection bodies to avoid conflicts of jurisdiction.
- Reinforce the capacities of these organizations (adequate human resources, materials and financial).
- Support inspection bodies in setting up a quality management system with a view to accreditation according to the ISO/IEC 17020 standard.
- Facilitate the access of inspection bodies to laboratory services, and strengthen their mutual collaboration.
- Support the establishment of the National Food Safety Agency:
  - Set up an ethical charter for inspectors and set up a committee to control and monitor the operations of inspectors (transparency, independence, impartiality, integrity);
  - Certify the technical skills of inspectors for control missions.

Regarding certification bodies:

- Strengthen the skills of the Ivorian organization already accredited ISO 17065 in order to extend its interventions in other fields relevant to the Ivorian economy, in particular in the agricultural sector for organic certification.
- Accredit the national certification body for compliance with national standards in accordance with ISO 17065.
- Map all the certification bodies operating on the national territory (products, systems, people).

3.8. Accreditation

Accreditation of conformity assessment bodies (laboratories, inspection bodies and certification bodies) is essential to ensure the recognition of the results of their activities internationally.

The establishment, organization, operation and international recognition of SOAC (by peers) should be supported, in particular on the following points:

- Statutes, missions and general organization;
- Technical assistance for the implementation of its quality organization according to ISO 17011: 2017 "Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies", which specifies the requirements relating to the competence, consistency of activities and impartiality of bodies carrying out the assessment and accreditation of conformity

assessment bodies offering services such as: analysis, testing, inspection, certification management systems, staff certification, product certification, calibration. It can also be used as a document serving as a criterion for the peer review process within the framework of mutual recognition agreements between accreditation bodies;

- Constitution of a body of assessors (system and techniques): Identify, recruit, train technical and system assessors, in RCI and in ECOWAS countries;
- Technical support (coaching, support, supervision, etc.) during the first accreditation operations, both at national and sub-regional level;
- Recognition agreements (European EA Accreditation Forum and its international counterparts IAF and ILAC).

4. Gap Analysis

4.1. Overall Assessment[22]

Based on international experience, there are three main stages in the development of an NQI:

4. Compliance with international trade rules and international recognition.
5. Generating added value to NQI customers.
6. Generating added value to economy and society.

In every economy, the weights of these stages vary, depending on the state of development but also on the perception and expectations from NQI stakeholders.

The purpose of an NQI is not only to establish a set of rules to protect citizens against the physical risks of people and property, or of diseases of food, phytosanitary, harmful or fraudulent origin, but also to promote national production. quality, generalized to all market players in order to reduce any unfair competition between them. The NQI concerns all products and services, imported or exported, used, consumed or implemented in all sectors of life in CDI, whether food or manufactured, construction (and the materials which participate in it), the environment, health (and the biological analyzes of laboratories which accompany it), or the management of public authorities which takes into account the economy and socio-cultural development as a whole.

Overall, an NQI Policy should have two objectives :

- Strengthen the institutional, legislative and regulatory framework in terms of quality: fill in the weaknesses of the institutional framework in terms of quality, respond to increasingly pressing market requirements (internal and external), improve or ensure product quality manufactured locally or imported, encourage quality policy in companies and administrations, propose efficient structures for control and assessment of conformity, strengthen environmental protection measures, strengthen professional organizations and associations involved in promoting quality, make an accessible and efficient metrological offer available, improve human resources in the quality professions.
- Allow the country to better exploit the opportunities available to it in a context of globalization and regionalization of economies, with membership of the WAEMU sub-regional market, ECOWAS, EPA-EU agreements, etc., and growing proximity to major international markets.

[22] See also Annex I, for a detailed NQI Côte d'Ivoire Assessment.

Compliance with international trade rules and international recognition

In the **first stage**, the objective is to convince others that NQI related processes in CDI are up to the requirements of international trade. This is achieved by having an appropriate legal framework, properly established NQI bodies, an operational NQI system, membership in international organizations, and mutual recognition agreements with these organizations. The level of fulfillment of this stage in CDI is unsatisfactory. The main area for improvement is full membership of international metrology organizations and active participation in the technical committees (especially CIPM[23] consultative committees).

The NQP of CDI identifies as one of the priority actions to support the participation of national NQI institutions in the activities and events of international organizations engaged in quality infrastructure. CDI should use this to strengthen its NQI capacity (via transfer of technology and skills), to defend its interests as well as have their interests recognized. Therefore it should join, participate in, or become member of international organizations for standardization, metrology and accreditation such as:

- International Organization for Standardization (ISO, Côte d'Ivoire is a full member);
- International Electrotechnical Commission (IEC, Côte d'Ivoire is a full member);
- International Telecommunication Union (ITU, Côte d'ivoire is a full member);
- Codex Alimentarius;
- International Bureau of Weights and Measures (BIPM); and
- International Organization of Legal Metrology (OIML).

Also the Action Plan of the NQP expressly includes participation in the General Assemblies of regional and international standardization bodies (ISO, ORAN, IEC, AFSEC, etc.) as well as participation in the work of Regional and International Standardization Committees (Codex Alimentarius, ISO, ORAN, IEC, SMIIC etc.) and collaborate with counterpart organizations.

Generating added value to NQI customers

In the **second stage**, the objective is to do things right and effectively, not only to convince others. This requires comprehensive stakeholder awareness of and appreciation for the benefits of NQI functions.

In respect of the second stage, Côte d'Ivoire exhibits a number of non-compliances in specific areas:

- measurements are not taken in some areas;
- measurements are not done properly;
- uncertainty is not assessed correctly;
- traceability is not provided fully;
- inter-laboratory comparison and proficiency testing are not undertaken;
- accreditation assessment is not carried out properly or is oversimplified;
- metrological supervision is not carried out by experts in metrology;
- inspection is not done properly or at all;
- inspection is not based on hard data, giving the feeling that it is based on personal judgment rather than on an objective process; and

[23] Comité International des Poids et Mesures/International Committee for Weights and Measures of the BIPM.

- paperwork for certification is not complete.

It is not clear to what extent such non-compliance is due to lack of proper procedures and to what extent it is due to lack of resources.

Generating added value to economy and society

The objective of the **third stage** is to go beyond core NQI functions to generate more added value to the society and economy especially for producing better products. Some examples of such contributions are listed below:

- Raising public awareness in NQI functions, especially in measurement.
- Using measurements in social areas such as management, system development, and performance evaluation.
- Helping to generate better services by convincing process owners to use relevant NQI tools.
- Helping operators to use scientific tools.
- Contributing to Côte d'Ivoire's innovation system by taking part in the establishment and maintenance of the system.
- Taking part in techno-parks and incubation centers and assist with funding organizations to select proper projects to support.
- Contributing to the development of science and technology by providing research infrastructure.
- Establishing partnerships with foreign organizations for the development of new or improved products or services.
- Contributing to product development processes by assisting developers and manufacturers.

Many steps in this stage are still in development in CDI.

4.2. Gaps in Concepts, Operations, and Outputs

Concepts Observed that May Have a Negative Effect on NQI Development

G1. Although private sector is represented in bodies like CODINORM, private sector participation in NQI decision-making processes should be increased.

The draft NQP acknowledges that concertation and exchange between private sector associations and public institutions need to be developed, in order to reach a sectoral consensus of operators, build partnership networks (private-private, public-private) and group associations into federations to strengthen their participation in different levels of decision-making.

Major private participation is foreseen in the Agency for the Development and Competitiveness of Industries in CDI (ADCI), and Centers of Support for Competitiveness and Industrial Development (CACDI) in the fields of food processing, textiles/clothing and the welding, plastics and mechanics. However, these institutions still need to be established.

G2. There is a tendency to rely on personal connections rather than on the rule of law to solve problems. For example, the weaknesses of the consumer associations commonly lie in, internal governance problems, and the mix between consumer protection and political politics.

G3. Expectation from NQI organizations is mostly in terms of "provide the paper I need". Implementation often lacks.

Operations

G4. All NQI organizations exist, but their effectiveness is not sufficient for the needs of Côte d'Ivoirian industries.

Strengthening the organizations of the quality infrastructure: the distribution of their competences must be clear and registered in the recognized international framework. The creation of SOAC as an accreditation body goes in this direction. Foreign observers will monitor its independence and effectiveness closely.

The main tools of a quality policy to be implemented by the public authorities must be carefully selected, according to the double criterion of their effectiveness and their cost. These are, direct actions on the economy, incentives, and the actions concerning the organization of the authorities themselves - themselves. To the latter:

The Metrology: the administrative legal metrology bases are now well entrenched in CDI. The development of a purely private domain demonstrates the role of these services in the economy. It is the essential responsibility of the Government to strengthen the system of fundamental metrology by ensuring its connection to the international system.

The Standardization: essential tool for quality. Standardization tasks (dissemination, consultation) have been developed with this in mind. It is a question of extending, continuous updating and specifying a technical activity adapted to the needs of manufacturers and users.

Compliance: is at the heart of the quality process, even if - it may not be equated with certification only. The value of certificates of conformity must be promoted and recognized by a lasting and indisputable accreditation system.

Market Functioning and Support for Better Products

More and more mandatory certification for products is needed, or at least desirable, however the benefits generated by this policy have not been assessed yet.

In CDI, certification is still too rare. This past February, the CEO of Qualitas Côte d'Ivoire announced that less than 3% of Ivorian companies were certified. Without prejudging the relevance or the method of calculation of this figure, it is undeniable that certification interests too few companies, not to mention going as far as certification, but also simply the objective of an internal organization mastered by quality management systems (QMS).

A notion of "product development support" with active utilization of NQI organizations does not exist.

The contribution of metrology to product development is unsatisfactory.

There are no strong linkages between metrology and technology development. Linkages between metrology and the national innovation ecosystem (including industrial R&D) need considerable enhancement.

A national innovation policy is not well developed. It neither covers all sources of innovation (such as using NQI as one of the pillars of innovation) nor is implemented fully.

The "research, innovation, industrial property and standardization" system should be considered as a whole, as an essential component of the competitiveness of an economy. One of the important objectives of standardization is thus to help create a solid technological infrastructure, a factor favorable to development driven by innovation. At the same time, standardization and industrial property both encourage innovation and facilitate the diffusion of technology.

The World Bank (2018) notes that despite the undeniable good performance of the Ivorian economy (and especially its services industry) with "a growth rate of 7.6% in 2017, close to that observed in recent years, and one of the highest of the continent and even of the world", the country's authorities should take "urgent measures" to boost the innovation sector.

There seems to be an absence of a strong venture and/or risk capital culture. This is hampering the development of new high-value products, reducing the competitiveness of Côte d'Ivoirian products in international markets.

4.3. Gaps in Legislation and Regulation

Legislation

In general, legislation is good. However, implementation of the legislation may not be very successful, due to resource limitations in certain NQI organizations.

Overall, the legal and regulatory framework for the NQI has reached a very elaborate and satisfactory level, which now allows the system to be implemented on solid foundations. The results are already visible and promising, and they need to be generalized and consolidated. The establishment of a modern and already well-developed legislative mechanism is to be credited to the efforts of the Ivorian Government, especially in recent years, resulting in a very extensive legal arsenal, which allows the implementation of the main principles related to quality. With the implementation of Decree No. 2016-1152 of December 28, 2016 making certain application standards mandatory and introducing the program for verifying the conformity of imported products, Côte d'Ivoire supposedly is even launching a "real revolution" in terms of Quality[24]. One of the issues is though, that secondary legislation, decrees, regarding the concretization and application of particularly the law on metrology are still missing.

The principle challenge now is the effective implementation of what is provided for in the legislation and regulations. In the perception of public authorities, quality incorporates regulatory safety requirements. Government intervention is necessary, and it must be clearly identifiable. The public authorities must therefore exercise their responsibilities in the legislative and regulatory framework of the quality infrastructure and in the field of application control.

In addition, in part secondary regulations, which should concretize laws, are not in place yet. For example, the Action Plan of the draft NQP of CDI expressly identifies development and adoption of "implementing decrees" for Law n ° 2016-411 of June 15, 2016 (relating to the National Metrology System) as a priority.

[24] Development of the National Quality Policy and its Implementation Strategy for the Republic of Côte d'Ivoire with a view to emergence by 2020, Ministere de l'Industrie et de Mines, 23 March 2018.

Another priority action is strengthen the application of Decrees 2014-460 and 461, and further regulation on the Law 2013-866 on standardization and quality promotion.

Other relevant, more recent, regulation in relation to the NQI in CDI, among others installing the West African Accreditation System (SOAC) as the accreditation body for Côte d'Ivoire:

- Decree 2017-567 of 6 September 2017, approving the public service concession agreements for Verification of Conformity of products imported in CDI.
- Order Nr. 984 of 28 September 2018, stipulating the authorization and operation of the West African Accreditation System (SOAC).
- Decree No 2019-396 of 8 May 2019, recognizing the public utility of the association of the West African Accreditation System (SOAC).
- Notice to importers and exporters, concerning the entry into application of Decision 2/2019 of the EPA Committee established by the Economic Partnership Agreement (EPA) between Côte d'Ivoire and the EU, relating to the adoption of Protocol No. 1 concerning the definition of the concept of "originating products" and the methods of cooperation, 2020.

Legislation needs improvement in the following areas:

- designating the metrology institute(s) as well as accreditation and standardization organizations in legislation;
- improving the governance of these organizations to better protect them from political and administrative interference;
- providing financial autonomy to these organizations and re-define their roles such that they become financially self-sustainable;
- vigorously improve Market Surveillance. As an improvement to the legislative system, the market surveillance approach could be supported by proposing a law requiring greater responsibility on the part of the manufacturer and supplier, which would ease the burden for the government control system. Currently, several ministries and agencies are in charge of control and inspection bodies which share the missions of national market surveillance, this requires improved coordination;
- develop and strengthen Conformity Assessment bodies (certification bodies, inspection bodies and calibration, analysis and testing laboratories);
- establish an effective national metrology system, and strategy;
- continue to put in place the legislative and regulatory framework related to quality;
- continue the development of Standardization;
- bringing the public and private sectors closer;
- promote and encourage Quality at all levels (consumers, companies, State);
- boost the functioning of public bodies in charge of Quality.

When it comes to Technical Regulations, the following actions are required:

- update legislative and regulatory texts to:
  - adapt to regional and international text;
  - clarify the responsibilities of regulatory bodies and inspection with acknowledging the reality on the ground and assigning the proper areas of competence of each;
  - put in place a framework for consultation and coordination of inspection agencies.

- ensuring the powers independence and impartiality of control and inspection agencies, essential to the accomplishment of their missions, with sufficient resources to ensure their roles;
- align the operation of control and inspection bodies in a quality approach according to the ISO 17020 standard.

The two core NQI laws, the one on Standardization and the one on Metrology requires a considerable quantity of secondary legislation to implement. Currently, secondary legislation is still insufficient to support the execution of both laws. Above all, the legal framework needs to be supported by capable implementation.

Law 2013-866 of December 23, 2013 on Standardization and Promotion of Quality, has three supporting decrees. Other orders are being prepared and awaiting validation. Law 2016-411 of June 15, 2016 relating to the National Metrology System defines the general principles of the National Metrology Policy in CDI so that it can contribute to the achievement of development objectives from the country. It concerns legal, industrial and scientific metrology. It defines the legal metrological control scheme sets the assessment requirements s kind s of ' measuring instruments or to type approval or model (initial verification and/or periodic monitoring of measuring instruments, approval of organizations operating on the national territory (importers, manufacturers, suppliers, repairers, installers, OEC). The law creates the national metrology structures. The leading metrology institute in CDI is LANEMA, in line with OIML D1 recommendations[25]. This also has negative consequences in international representation and participation in international activities. The Law also establishes the national LNM[26] laboratory and the BIM[27] concerning with measuring instruments, and fixes the penal provisions in case of violation (penalties, fines, taxes, fees, procedures). However, the law still must give rise to decrees and implementing orders to be genuinely implemented (in particular with regard to the establishment of the LNM and the BIM. This may have negative consequences in international representation and participation in international activities.

In CDI, technical regulations consist on the one hand of texts of laws, ordinances and codes initiated by ministerial departments, and on the other hand by decrees, decisions and orders. A considerable quantity of technical regulations has been enacted. It may be that there has been too much legislation (primary and secondary), which places a burden on industry. At the same time, the regulatory framework needs to be supported by capable implementation. Without being exhaustive, Technical Regulations are included in:

- Law 63-301 of June 26, 1963 on the Suppression of Fraud in the Sale of Goods and the Falsification of Food and Agricultural Products,
- Law 63-323 of July 25, 1963 relating to animal health police in CDI and its implementing Decree 63-328 of July 29, 1963,
- Law 64-490 of December 21, 1964 relating to the protection of plants, and Decree 63-457 of November 7, 1963 fixing the conditions of introduction and export of plants and materials likely to transport organisms dangerous for the cultures,

[25] See OIML D1, 2012. Currently a revision of OIML D1 is underway, the latest revised draft is from 3 December 2019.
[26] LNM: National Metrology Laboratory.
[27] BIM: Office of Instruments and Measures.

- Law 78-633 of July 28, 1978 relating to competition, prices, prosecution and repression of breaches of economic legislation, and their various implementing decrees,
- Law 86-478 of July 1, 1986 relating to fishing,
- Law 96-563 of July 25, 1996 relating to the sanitary and qualitative inspection of the animal foodstuffs and animal origin, and its Decree of application n ° 99-447 of July 7, 1999,
- Law 96-766 of October 3, 1996 on the Environment Code,
- Law 98-755 of December 23, 1998 on the Water Code,
- Law 2016-411 of June 15, 2016 relating to the national metrology system in CDI,
- Codex Alimentarius and standards of the International Organization of Epizootics (OIE),
- Etc.

In addition to the national regulatory system concerning Technical Regulations the Technical Regulations apply of the two Regional Economic Communities (RECs) of which Côte d'Ivoire is a part, namely WAEMU and ECOWAS:

- WAEMU**:** Regulation No. 007/2007/CM/WAEMU relating to the health safety of plants, animals and food in the WAEMU area,
- ECOWAS**:** Regulation C/REG.3/05/2008 of May 18, 2008 harmonizing the rules governing the quality control, certification and marketing of plant seeds (import and export of seeds) in the ECOWAS region, Regulation C/REG.21/11/10 of November 26, 2010 harmonizing the structural framework and operational rules in matters of plant, animal and food safety in the ECOWAS region.

There is no technical lead organization in legal metrology.

The Office of Instruments and Measures (BIM) responsible for legal metrology still needs to be set up. The same goes for the National Metrology Laboratory (LNM), concerned with industrial and scientific metrology.

Conflicts of Interest

Conflict of interest issues are not easily clarified, especially with frequent changes of legislation.

The quality policy of Côte d'Ivoire is part of a perspective with multiple overlaps: ECOWAS and WAEMU[28] zone, EPA with the European Union, AGOA with the USA, etc. This may cause conflicts of interest, both on the objective-side and on the actors-side. This should not mean "resigning" to the minimal compromise of agreement on a narrow section of non-contradictory points, however on the contrary should result in continuing to affirm a high level of ambition aligning and coordinating the relationship between national and regional interests by the Government in the implementation of its Quality Policy.

On top of the regional Quality Infrastructure involved parties, in 2013 the Pan African Quality Infrastructure (PAQI) was instituted and is composed of the African Organisation of Standardization (ARSO), the African Accreditation Cooperation (AFRAC), the Intra-Africa Metrology System (AFRIMETS) and the African Electro-technical Standardization Commission (AFSEC) as the continental platform for all

[28] In the West African Economic and Monetary Union (WAEMU - a customs and currency union) member countries agreed to establish a System for Accreditation, Standardization and Quality Promotion through their quality program launch in November 2005. There is a need to harmonize the quality programs in ECOWAS and WAEMU to optimize QI programs and avoid duplication. Source: Pan-African Quality Infrastructure, Technical Barriers to Trade and Sanitary and Phytosanitary Policies of African Regional Economic Communities (RECs), GIZ/PTB, October 2017.

matters related to standardization, metrology, accreditation and conformity assessment in order to strengthen the competitiveness of Africa's goods and services and contribute towards the industrialization of the continent and its sustainability.

The Technical Regulations Department's scope of operations is very wide and its powers are broad. It controls the core QA service providers and gives the impression of being centralized NQI organization. This impression generates the appearance of a conflict of interest in two areas:

- In CDI, technical regulations consist on the one hand of texts of laws, ordinances and codes initiated by ministerial departments, and on the other hand by decrees, decisions and orders. There are many different Technical Regulation regulations. Most of the technical regulations stem from the Ministry of Agriculture, and the Ministry of Environment.
- Added to the national regulatory system are the technical regulations of the two Regional Economic Communities (RECs) of which Côte d'Ivoire is a part, namely WAEMU and ECOWAS :

- WAEMU: Regulation 007/2007/CM/WAEMU relating to the health safety of plants, animals and food in the WAEMU area,
- ECOWAS: Regulation C/REG.3/05/2008 of May 18, 2008 harmonizing the rules governing the quality control, certification and marketing of plant seeds (import and export of seeds) in the ECOWAS region, and Regulation C/REG.21/11/10 of November 26, 2010 harmonizing the structural framework and operational rules in matters of plant, animal and food safety in the ECOWAS region.

4.4. Gaps in NQI Structure

Administrative and financial autonomy is insufficient, or missing in core NQI service providers (in metrology, accreditation, and standardization). This makes the impartiality for metrology and accreditation questionable.

With regard to Metrology, regulations[29] relating to the stature of public laboratories should be revised, with a view to granting them financial autonomy and flexibility in the acquisition of goods and services and operation. In CDI, public laboratories are a particular issue. Each ministry has developed its laboratory, which poses a problem of competition with private laboratories. The status of these establishments is often a problem and does not allow them to be granted real financial autonomy or flexibility in the acquisition of equipment. Public laboratories should be given financial autonomy and flexibility in the acquisition of goods and services and their operation, and strengthening their capacities by providing them with adequate resources (human, material and financial).

Inspection

Inspection processes within market surveillance operations are not accredited. This raises questions about the technical competence of inspectors. At present, MSBs perform inspections, even though they are not accredited for this. Inspection requires a specialized set of expertise. Some independent accredited inspection bodies exist, but their role in market surveillance processes is not clear. In addition, the role of personnel certification is not well defined.

[29] Regulation C/REG.19/12/13 of December 17, 2014 adopting the scheme of the Regional Quality Infrastructure (IRQ) of ECOWAS and the Regulation 08/2014/CM/UEMOA, establishing a Metrology System in the WAEMU member states.

There is a lack of ISO 17020 accredited inspection bodies. Côte d'Ivoire's integration into the world economy can only be achieved by adopting common standards, measurement equipment linked to international standards, reliable and competent conformity assessment bodies, and therefore duly accredited. Inspection bodies need to be encouraged to set up quality management systems so that they can ultimately be accredited according to ISO 17020 relating to the " requirements in terms of skills of bodies carrying out inspections, as well as in terms of impartiality and consistency of their inspection activities. In the field of Conformity Assessment, this also goes for laboratories, for example, an organization like the Laboratory of Building and Public Works (LBTP) is still to be accredited. There is also a lack of an accredited national calibration laboratory capacity, resulting in a high cost of calibrations and accreditation.

Protection of the Market

Existing implementation procedures for discouraging low-quality, non-compliant products (including counterfeit products) are insufficient to protect the market. This is an important issue, as conformity assessment by self-declaration is more and more frequently used.

Economic operators are required to only make products available on the market that meet the essential safety requirements as defined in the applicable technical regulations (mandatory standards, technical regulations, etc., see Decree 2016-1152).

In general, control and inspection bodies in CDI face various common difficulties:

- Lack of financial and material resources, especially in equipment and means of transport,
- Staff shortage (number, qualification),
- Lack of coordination between the various inspection activities, resulting in multiple inspections,
- Difficulties in acquiring and maintaining equipment,
- Costs and times of obtaining the results of analyzes and tests,
- Lack of ISO 17020 accreditation of inspection bodies.

Assessment of the impact and effectiveness of Côte d'Ivoire's market surveillance system is not carried out.

A priority action of the draft NQP is to train control officers, in particular on new targeting and risk analysis techniques, which serve as a basis for developing control and monitoring programs. This means that currently there is a lack of market surveillance tools such as targeting and risks analysis.

Conformity Assessment System

The difference between implementation of local and regional conformity attestation may harm some Côte d'Ivoirian producers. These producers may be forced to comply with both local and regional set of rules, increasing the cost of the products and reducing competitiveness[30].

[30] In 2017, the Economic Community of West African States (ECOWAS) established a Regional Accreditation System (RAS) and community committees in the areas of metrology, technical regulation, and conformity assessment. To the latter, at the same time, CDI has its own Verification of Conformity program for all exports to the country. Source: ECOWAS Develops Regional Accreditation System In Bid To Ensure Quality Infrastructure, Products In West Africa, 11 November 2017, ECOWAS-website: https://www.ecowas.int/.

A list of required conformity assessment processes does not exist. Producers have to spend a lot of time to get this information.

Technical Regulations and Standardization

Despite representation in bodies like CODINORM, the private sector plays an insufficient role in the development of standards. Developing standards (voluntary standards) is an activity to be picked up by private sector and the sectors within the business community. Presenting information on a website and inviting comments from industry representatives are necessary, but not sufficient. Even when industry participates, the impact is low due to limitations on expertise skills in standards development. Interest groups such as manufacturers' unions and sector trade groups make an insufficient contribution to the standards development process.

The apparent low level of demand for harmonized standards, despite some recent progress, particularly in the field of consumer products, is a problem as it may indicate the domestic markets as a dominant target rather than foreign markets.

As an example: the lack of harmonization of Rules of Origin across overlapping regional blocs could create further difficulties for countries with multi-membership. For instance, even though ECOWAS and WAEMU are reported to have growing rapport and coordination in their trade liberalization schemes, macroeconomic policies convergence, and harmonized rules of origin, the United Nations' Economic Commission for Africa notes that there exists differences in their value added levels[31]. Indeed, regarding the criteria to determine product origin, the outstanding disagreement among the ECOWAS and the WAEMU is about the determination of the value addition. Both organizations have adopted their own definition of value addition based on different approaches. This leads to a lack of symmetry which carries over into the approval of industrial products. An application for approval may be rejected by the WAEMU but accepted for the ECOWAS Liberalization Scheme.[32]

This is one of the reasons why the process to receive a certificate of origin is perceived as lengthy and burdensome causing excessive delays. Furthermore, the ECOWAS certificate is only 6 month valid. Economic operators must submit separate applications for approval for the scheme concerned (i.e., ECOWAS or WAEMU). In addition, under the ECOWAS scheme, they have to get a consecutive approval by the National Approvals Committee (NAC) and the ECOWAS Commission. As a result, the standardization of the origin certificate issued within the ECOWAS space is not yet a reality.[33]

Stakeholders have low awareness of standardization.

In the field of education, awareness and teaching of NQI potentially help future consumers to develop real interest in better quality products and services, respectful of their health and safety. Awareness of Quality by consumers, is truly the heart of any NQI, because it is they who are the basis of demand for products and services. Consumers are therefore the ones who will decide on the Quality trend for the supply of products and services in CDI, and who will demand the market for improved quality.

[31] Facilitating Trade in ECOWAS Insights from the ITC Business Surveys on Non-Tariff Measures, International Trade Center, 2016.
[32] Regional Integration and Non-Tariff Measures in the Economic Community of West African States (ECOWAS), UNCTAD, 2018.
[33] Sic.

Regarding the issue of awareness raising, the impression is that the main activities are done under international donor-funded projects. Which means, once this funding expires, the activities usually cease to continue. An example is the support of UNIDO via a broadcast and awareness raising program, explaining basic functions of the national QI (e.g. the calibration of weights) in CDI[34].

New standards and information on international developments in standardization are published on the CONDINORM website, however more generally speaking, this information is disseminated too slowly.

Electronic and physical recordkeeping and maintenance of standards need improvement.

Databases should be centralized (actors and driving forces linked to quality) and the various databases should be harmonized in a single location, for the ease of accessibility of data by stakeholders, and break down specific requests wherever it is useful. In Market Surveillance, “alert-networks” through the creation of an IT-tool based on existing Industries databases should be strengthened.

Differences in the prioritization of needs in CDI versus prioritization of the WAEMU is a source of concern in the preparation of Technical Regulations.

Since 2008, the second phase of the WAEMU Quality Program aims to contribute to the development of the commercial capacities of the countries of West Africa, particularly in the agro-food sector. Specifically, the Program has objective to strengthen the competitiveness of businesses and compliance with international trade rules and technical regulations, in particular the WTO Agreements on Technical Barriers to Trade (TBT) and on Sanitary and Phytosanitary Measures (SPS).

The effectiveness of existing standards has not yet been appraised.

Metrology and Measurements

The availability and quality of reference materials for chemical and medical measurements are not sufficient.

Participation in international inter-laboratory comparisons and entries to CIPM[35]/Mutual Recognition Arrangement and Calibration and Measurement Capability tables are low compared to best practices in the world. The NQP of CDI recognizes the need to support mutual recognition agreements under the West African Accreditation System (SOAC).

Product testing, a potential major source of revenue, is restricted by limited laboratory investments in the Scientific Metrology Centers and Legal Metrology Centers.

LANEMA "National Laboratory for Testing, Quality, Metrology and Analysis " is the public institution in charge of Metrology. It was created on June 27, 1985 in the form of a Directorate at the Ministry of Industry. It was designated as CDI's Official Fraud Repression Laboratory in 1993.

LANEMA is an EPN dependent on the Ministry of Industry. It assumes many missions: analyzes and tests of conformity to standards, metrological controls of measuring instruments, tests of electromechanical equipment, technical controls, physical physicochemical analyzes (water, agro-food and industrial products, petroleum products and pollution), research and development, assistance and training,

[34] Leveraging the Impact of Business Environment Reform: The Contribution of Quality Infrastructure Lessons from Practice, DCED, June 2014.
[35] Comité International des Poids et Mesures/International Committee for Weights and Measures of the BIPM.

maintenance, control and repair of aircraft. It also provides assistance to manufacturers by offering them collective means of Control, Testing and Analysis, as well as Assistance-Consulting and Training. LANEMA already has nearly 30 years of experience and several recognized skills. Next to this public CAB, a range of private laboratories (ENVAL, VAGNY LAB, LBCA, SGS, Bureau Veritas, etc.) are active in CDI.

Improvements in Conformity Assessment are essential on encouragement of the creation of national associations (or federations) of laboratories, and encouragement of accreditation of CABs. To the last point, fewer than ten laboratories[36] in CDI are accredited to date, due to a range of common difficulties:

- insufficient qualified technical personnel, and material and logistical means;
- difficulties in acquiring and maintaining equipment with regard to the status of laboratories (public establishment or simple dismemberment of public administration subject to the requirements of public procurement rules);
- lack of local skills in critical equipment maintenance;
- lack of an accredited national calibration laboratory resulting in a high cost of calibrations and accreditation;
- cost of obtaining and maintaining accreditation (staff training, cost of equipment, reagents and reference materials); and,
- difficult access to accreditation.

There is shortage of exposure, understanding how they operate, and what kinds of management tools they use, as well as how they plan and prioritize new investments, of and about metrology institutes.

Despite the existence of LANEMA, CDI has insufficient metrological supply of services, which forces users to seek long and costly calibration services abroad, causing significant immobilization of their measurement means, and quality and delays in metrological services detrimental to their customers.

Interaction with industry in designing new high-quality goods or improving production is at a low level. More measurement laboratories are needed for chemical and medical analysis. More measurement laboratories are needed for metallurgical analysis. More testing laboratories are needed for products that are in mandatory product testing lists. Problems exist regarding uncertainty evaluation for traceability. Problems exist with traceability, mostly due to lack of resources.

Accreditation

Accreditation for medical laboratories in CDI is recognized by the international system. The accreditation of medical biology analysis laboratories is entrusted to the Regional Center for Health Assessment and Accreditation of Sanitary Establishments in Africa (CRESAC), a regional body created in April 2005 and whose headquarters is also in Abidjan, Côte d'Ivoire (for reference: Order 184/MSHP/CAB of October 26, 2010). However, accreditation in CDI still has the following gaps:

Operational effectiveness of accredited bodies could not be assessed. Almost all areas of certification are covered. There is room for improvement in the areas of energy management, information security and, to some extent, personnel certification.

[36] For example: the water and environmental chemistry laboratories are accredited ISO 17025 (TUNAC).

More certifications by personal certification bodies are needed for personnel working in various NQI organizations, especially in Market Surveillance Bodies.

The IT infrastructure may not be adequate to keeping track of the large number of accredited organizations.

There still may be insufficiency of technical assessors especially for laboratory accreditation that makes sure that traceability is obtained properly, is a problem.

Other Issues

NQI services seem not in the form of steering or guiding but controlling. This is especially important in testing and product certification. Existing NQI services are mostly concentrated on controlling end products or services for compliance.

The scope of operations (especially in product and service certification bodies), relations with similar bodies in other countries, and relations with international organizations are pretty well known. However, the following characteristics of independent NQI service providers are not assessed and documented:

- Quality of operations
- Impact on economy and society
- Relations with core service providers (metrology, accreditation and standardization)
- Relations with regulating bodies

4.5. Gaps in Institutional Development & Decision-Making

There is considerable room for improvement in institutional development in the following areas:

- Long term planning responsive to national economic forecasts in both NQI institutions and the Technical Regulations Department.
- Assessment of operational effectiveness.
- NQI needs assessment.
- Monitoring and self-assessment of NQI organizations.
- Human resources, staff capacity building and career planning.
- Measurement of the economic and social impact of core NQI service providers.
- Investment planning to prioritize the use of limited resources more effectively.
- Customer feedback and stakeholder expectation monitoring system.
- Knowledge management and project management systems.

The main source of problems in decision-making is the weak institutional development of the key players in CDI's NQI. This institutional development problem is related to the institutional experience of core QA service providers. Côte d'Ivoire's NQI organizations and their mode of operation are relatively young and need time to fully develop. On the other hand, these NQI institutes have substantial economic and social contributions to make. It would be beneficial to accelerate the institutional development of core QA service providers to increase their effectiveness and efficiency and decrease the cost of their operations.

The implementation of the National Quality Policy implies that multiple entities must act in a harmonious and participative manner. This aspect requires coordination and supervision. For this, it is recommended to entrust this task to a structure institutional leadership, permanent and politically supported , in which

realize the institutions in charge of quality and conformity assessment. Such a structure should be recognized legally and politically to give a real scope for its action. On this basis, it will be charged an impulse and supervision of the implementation of the National of Quality Policy.

The Directorate for Promotion and Quality and Standardization (DPQN)[37], by virtue of its missions and the length of its commitment to quality, constitutes the ideal candidate, already experienced, competent and credible for any mission linked to quality at the national level. Because at the helm of the approach is the need to coordinate the National Quality Policy, currently distributed across several institutions and services, from certainly complementary angles but which should be all the more strongly coordinated by a central entity such as the DPQN.

The DPQN must become the obligatory point of consultation for any reform of the NQI, and must be able to provide its technical expertise in terms of quality in the implementation of public policies. Its missions should consist of interventions such as:

- Encourage and support national experiences in communication, awareness and quality promotion.
- Encourage the implementation of collective actions intended for companies, led by actors such as CCIs, CACDIs, quality associations, etc.
- Participate in the work of the CIN and communicate on the results.
- Centralize databases (actors and driving forces linked to quality: harmonize the various databases in a single location, and break down specific requests wherever it is useful.
- Supervise the creation and operation of CACDIs, and represent the interests of the State with regard to their public missions.
- Give more visibility to the Quality and Excellence Awards, JNQ, ensuring a place for Quality Infrastructure in the National Development Plan, and create an Accreditation Award.
- Oversee the installation of SOAC and its implementation.

From an analysis of the (legal, and) institutional framework for environmental and social management and impact assessment and management in CDI in 2018, as proxy for the Delivery of Basic Services to the Citizens (Enhancing Government Effectiveness for Improved Public Services, a number of conclusions were drawn on the performance of the government of CDI[38]. They seem likely applicable to the NQI-domain:

- most institutions are in place and their mandates have been defined. However, their actions are not coordinated and they lack human and financial resources;
- there is no coordination between the central and regional levels regarding monitoring of implementation of government intervention for environmental and social management and impact assessment and management);
- administrative procedures are slow and do not allow for timely and rapid decision-making;
- the implementation of the Social Protection Strategy needs to be supported to ensure that vulnerable groups are properly taken into account;

[37] The DPQN, Directorate of Promotion of Quality and Standardization, created by Decree 2011-425 under the organization of the Ministry of Industry, is responsible, among other things, for developing, implementing and monitoring the standardization and quality policy.
[38] Economic Governance Programme for the Delivery of Basic Services to the Citizens (Enhancing Government Effectiveness for Improved Public Services), World Bank, January 2018.

- public inquiries are often public information sessions and do not result in meaningful public consultation;
- the complaint management system set up by the government is not well known, there is no synergy between this system and those set up by the ministries; and,
- studies are very often of very poor quality, which leads to considerable delays in their approval and implementation.

4.6. Gaps in Infrastructure and Capabilities

There are serious limitations in metrology due to infrastructure. The other Scientific Metrology Centers also need some renovation of existing premises as well as new and often better measurement system in their laboratories.

Metrology is generally the weak link in a NQI, as is the case in CDI. Maintaining and upgrading the National Metrology System is an essential priority of the NQP, because it conditions the quality of all the activities of the NQI, by impacting everything related to the measures .An insufficient offer of metrological services forces users to seek long and costly calibration services abroad, causing significant immobilization of their measurement means and delays, detrimental to their customers.

Knowledge transfer is needed.

Rules for the transportation of equipment to other countries for repairs, calibrations, and comparisons may need revision, and should be an attention point.

In some areas, such as product testing laboratories, product certification bodies, and medical laboratories, the number of accredited organizations may not be sufficient to fulfill industry needs.

There still seems lack of awareness about usefulness of NQI, including available physical infrastructure.

Technical Capacity

Existing knowledge in the following areas need to be enhanced or corrected:

- knowledge of how market economies work;
- knowledge of the operations of NQI organizations and conformity assessment schemes in competitive environments;
- knowledge of what similar organizations in other countries do (and why).

There is room for improvement in technical staff's knowledge of measurements at various NQI organizations.

Poorly organized, insufficiently trained or under-equipped public services, which struggle to fulfill their missions, causing unnecessary annoyance and unjustified delays in the allocation of permits or authorizations, which slow down the supply of services or delay the implementation of building construction projects, etc.;

There is a shortage of properly qualified and knowledgeable long-term external consultants.

Physical Infrastructure

There seems to be considerable need for new investments in the following areas in order to better utilize existing technical capability more:

- facilities infrastructure;
- measurement equipment;
- IT equipment.

Capabilities

Côte d'Ivoire's network of testing laboratories seems elaborate, however calibration lack behind. Capacity problems underlie the functioning of these laboratories:

The capacity of the Scientific Metrology Centers to provide traceability to calibration and testing laboratories through direct calibration of measurement instruments is not sufficient.

The capacity to organize inter-laboratory comparisons and proficiency testing in order to handle all calibration and testing laboratories is not sufficient.

The capacity to participate in such comparisons and testing needed for international recognition of accreditation is not sufficient.

4.7. Gaps in Awareness, Expectations and Perception

A lack of stakeholder awareness and low staff exposure to international best practices seem to be common throughout the NQI system. A lack of knowledge of the latest competitive tools or techniques or an insufficient level of research and development which limits the competitiveness of Ivorian companies on the national, regional and international markets.

Consumers' Quality awareness must be developed so that the customer is the first user, assessor and quality seeker. Consumer awareness and information should be undertaken from an early age so that everyone can become aware of the challenges and risks associated with non-quality.

Stakeholder expectations and perceptions are not determined.

Regulatory Impact Assessment is not used, but the effects of various decisions by NQI organizations are not studied.

There is a gap in public awareness and expectations regarding NQI in CDI. This is a serious problem that needs to be remedied as soon as possible. For example, the concept of TR is not broadly understood: TR are often confused with standards or business regulations. A lack of awareness of the advantages brought by quality management systems, which delay their implementation in companies which thus continue to face significant costs of non-quality;

In industrially developed countries, private sector producers are the driving force in NQIs. Generally, a market need is recognized and the industry responds with proposals to address the need. The state regulates the market and establishes key elements of an NQI, such as regulators, metrology, standardization, and accreditation organizations. Needs are apparent and awareness among producers is widespread. The public is rather knowledgeable due to broad information dissemination. In CDI, in contrast, the state is expected to be the driving force in the NQI.

Quality Infrastructure should be integral part of the Industry Policy in CDI. The Government of CDI intends to ensure:

- The repositioning and development of light manufacturing industries in connection with strategic partnerships to catalyze the emergence of new sectoral clusters with a view to industrial emergence, including the assembly sectors, equipment, computers, household appliances, clothing shoes, wood, leather, etc.
- The densification and development of structuring industries such as chemistry, plastics, the manufacture of construction materials, cement works, metallurgy and steelworks, and construction.
- The development of non-food consumer industries such as the pharmaceutical sector, cosmetics, the textile sector, and packaging.
- Consolidation of a mining raw materials transformation strategy, linked to the development of the mining sector (gold, manganese, iron, nickel, etc.).

As part of strengthening the competitiveness of Ivorian businesses, the Government is implementing the National Restructuring and Upgrading Program.

Even within regulatory bodies, there is confusion about how market surveillance works in CDI, and who is responsible for what, and overall, market surveillance lacks coordination and effective collaboration.

In CDI, the market surveillance system is complex because it includes many actors who are responsible, at different levels and under the supervision of several ministries, for regulatory inspection missions, both for imported products and for those locally produced. Thus, several ministries are in charge of control and inspection bodies which share the responsibilities, missions and activities of national market surveillance:

- Ministry of Trade, Industry and SME Promotion, Industry Department:
  - The Ivorian Standardization Committee (CIN), created by Decree 2014-460 of August 6, 2016, is responsible, among other things, for monitoring the application of standards made mandatory;
  - The National Committee to Combat Counterfeiting and Piracy, created by Decree 2014-420 of July 9, 2014.
- Ministry of Trade, Industry and SME Promotion, Trade Department, as per Decree 2011-399 of November 16, 2011:
  - The Department of Metrology , Fraud Repression and Quality Control is responsible for ensuring the application of regulatory texts relating to metrology and quality (Law 2016-411 of 15 June 2016 relating to the system national metrology) , to ensure the verification and calibration of masses and measuring instruments, to assess the impact of metrological controls on the behavior of economic operators, to participate in actions to promote quality in conjunction with the technical structures concerned , to control the quality of products and goods of all kinds, to carry out awareness-raising actions for consumers on dangerous products , to monitor product traceability and to observe and suppress fraud in commercial matters.
- Ministry of Health and Public Hygiene, as per Decree 2016-598 of August 03, 2016:
  - The Department of Public Hygiene and Health-Environment is responsible for assessing, preventing and managing the health risks linked to the lack of hygiene and unsanitary conditions.
  - The health police services are responsible for ensuring compliance with health and public hygiene regulations.

- Ministry of Agriculture and Rural Development, as per Decree 2016-563 of July 27, 2016:
  - The Plant Protection, Control and Quality Department is responsible for the application of phytosanitary agreements and conventions, the sanitary inspection of imported and exported plants and derivatives, the quality control and packaging of agricultural products. , organize and coordinate health control and inspection as well as the quality of foodstuffs intended for consumption.
  - The General Direction of Productions and Food Security, DGPSA.
- Ministry of Animal and Fisheries Resources, as per Decree No. 2014-552 of October 1, 2014:
  - The DPE Breeding Productions Department is responsible for implementing the texts relating to animal production, participating in the promotion, regulation and control of the processing of products of animal origin.
  - The Animal Nutrition and Pastoral Area Management Department is responsible for: controlling the quality of animal feed.
  - The Department of Veterinary Services (DSV) is responsible for animal health police, animal health regulations and information, official control, sanitary and qualitative inspection of animal, fishery and animal foodstuffs, sanitary control of establishments processing and processing, ships, primary storage warehouses, means of transport, distribution, catering and establishments manufacturing and storing animal feed; border health inspection and control.
  - The Directorate of Aquaculture and Fisheries.
  - The Veterinary Sanitary Inspection and Control Service at the SICOSAV Borders.
- Ministry Communication, Digital Economy and Post, Department Communication, as per Decree 2017-151 dated 1 March 2017:
  - The Advertising Communication Department is responsible for promoting the promotion and development of advertising activity following the proposals of the Higher Advertising Council, validating the advertising message projects presented by applicants, ensuring monitoring of broadcast messages.
- Ministry of Petroleum, Energy and Renewable Energy Development:
  - The Directorate General of Hydrocarbons is responsible for ensuring the coordination of resources for the exploitation and production of hydrocarbons, the supply, refining and distribution of petroleum products, monitoring and regulation of hydrocarbons.
- Ministry of Economy and Finance:
  - The Directorate General of Customs is responsible for enforcing the legislative and regulatory provisions to which the movements of people, goods, means of transport and capital entering and leaving the territory are subject. Customs therefore has several missions: fiscal, economic, trade facilitation and support to administrations.
- Ministry of Environment, Ministry of Ministry of Construction, Housing and Urban Development, Ministry of Transport, and Ministry of Labor.

There is a general public awareness problem in CDI regarding what NQI is and how it operates. Awareness of needs, good practices, and expectations on market surveillance in particular is weak and requires improvement. This issue can be solved with a single large public awareness campaign (Public Awareness

Campaign), as described below, but this has to be sustained in the long run through ownership of the process.

Efforts should be made to:

- Introduce prices of Quality Excellence: these prices already exist, but more visibility should be given to these, communication could be improved, more associations and federations should be involved, etc.;
- Create an Accreditation Award, to promote accredited CABs or those in the process of accreditation, and publicize the champions. It is also a means of communicating about what an accreditation is, which does not relate to the whole organization of a laboratory, but to very specific scopes;
- Establish incentive measures (tax, bank loans, etc.) intended to help companies resolutely committed to a quality approach (Establishment of QMS, Occupational Health and Safety, certification or laboratory development program, acquisition of production equipment...) or who invest in the preservation of the environment;
- Imagine other ways of promotion : technical days, lunch-debates, thematic meetings, participation in television programs, etc.;
- Harmonize quality specialists training programs: too many differences exist curriculum is nt that form under the same label of quality experts from very different levels. The establishment of courses recognized and shared by leading schools at the international level would make it possible to give more notoriety to the profession;
- Accompany and support Consumer Associations to help them play their role in QI, help them develop internal sources of funding, help them communicate (conferences, publications, etc.);
- Support information/awareness, education and communication actions on quality.

4.8. Gaps in Coordination

Having a central authority on NQI should make coordination and long-term planning easy. In the case of the DPQN, however, there is not much evidence that coordination and long-term planning are working efficiently as of yet. Central roles of critical elements of the NQI are delegated to either DPQN, under the Ministry of Commerce, Industry and SME in particular with regard to the development, implementation and control of industrial standards and responsible for the impetus and the supervision of the implementation of the National Quality Strategy.

Aside of the DPQN, a High Quality Council is active (or, is planned to be active?), and CODINORM is assigned to coordinate NQI functions. The creation of a High Quality Council should ensure effective coordination of the NQI of CDI. As part of the conformity assessment of products whose standards are made mandatory, the State has entrusted CODINORM[39] with the technical management of the system for verifying compliance with standards made mandatory (VOC), for products imported, exported and/or manufactured locally and placed on the market (agreement of September 6, 2016). CODINORM is accompanied by the Ivorian Standardization Committee (CIN), established by Decree No. 2014-460 of 6 August 2014 on powers, structure and functioning. The CIN aims to contribute to the implementation of the national quality policy, the system for the development and application of standards, and quality-

[39] CODINORM, together with the Centre d'information sur les normes et la Réglementation (CINR), is the TBT/SPS Enquiry Point of Côte d'Ivoire.

control methods for products, goods and services for the public. CIN has integrated the private sector. On top of that, there are (delegations of) the regional Quality Infrastructure players. It remains unclear who has the final authority.

For a better central coordination, an update of the legal framework (in particular Decree 2014-461 of 2014/08/06, relating to the modalities of application of law 2013-866 of December 23, 2013 on standardization and quality promotion) is required, in order to strengthen the powers of the CIN and the DPQN in their "orientation, coordination, monitoring and evaluation of standardization activities". Also, a framework for coordination and consultation between ministerial departments involved in the development and application of Technical Regulations should be established. Currently, the Ministry of Trade, Industry and SME Promotion overlooks the Technical Regulations in CDI[40].

Furthermore, the lack of coordination and oversight in the field of market surveillance has been identified mainly due to the many actors who are responsible, at different levels and under the supervision of several ministries, for regulatory inspection missions, both for imported products and for those locally produced. Related to this, but to be regarded as a separate issue all together, is a lack of coordination between the various inspection bodies and inspection activities, resulting for example in multiple inspections on quality and conformity. A framework for consultation/coordination of inspection agencies is required.

G69. Coordination between the different Metrology Centers is still substandard.

In CDI, the Office of Instruments and Measures (BIM) responsible for legal metrology still needs to be set up. The same goes for the National Metrology Laboratory (LNM - industrial and scientific metrology).

4.9. Gaps in Funding

G70. Financial and other resource problems are common in all NQI organizations.

Funding for standardization work is usually mainly provided by economic players (paid access to standardization commissions and sale of standards), as the State would participate in the sphere of providing subsidies. By way of comparison, in Europe, standards are funded 90% by industry, 8% by national organizations and 2% by the EU, which makes a financial contribution to standardization work (via CEN, CENELEC and ETSI).

In CDI, international donors play a significant role in the development of a NQI. For example, the EU-funded "West Africa Private Sector Competitiveness Support Programme" supported the alignment of the NQPs with the regional quality policy (ECOQUAL). This program created a network of accredited CA services to provide the full range of required regional services, of which several CABs in CDI and LANEMA, and a regional certification scheme and a regional "ECOWAS Product Certification Mark" for products is established, promoted and used. This scheme selected seven Product Certification bodies with regional scope to participate, of which two from CDI.[41]

[40] Through the departments of the Directorate of Metrology, Quality Control and Fraud Prevention (DMCQRF) and Trade Regulation Directorate (DRE). Source: Implementation and Administration of the Agreement on Technical Barriers to Trade - Communication from Côte d'Ivoire, WTO, January 2020.

[41] Mid-Term Evaluation of the West Africa Private Sector Competitiveness Support Programme, December 2017. Another of such a program is UNIDO's West Africa Competitiveness Programme –Strengthening the regional quality infrastructure and improving the regional policy framework for industrial competitiveness.

Lack of financial autonomy is harming the NQI organizations, which place an unnecessary burden on the Government of CDI budget. A long-term strategy for CDI's NQI is needed in order to make relevant NQI organizations (whether in standardization, metrology or accreditation) financially self-sufficient. Institutions like LANEMA, liaised to the Ministry of Industry, LANADA[42], LNSP[43] and AGEDI[44] are National Public Establishments (EPNs), and as such dependent on the national budget cycle[45].

There is a serious problem regarding funding new operations and services, such as new measurements, production of reference materials and organization of laboratory inter-comparisons and proficiency testing. Raising funds for new investments can be achieved either by (i) increasing government support or (ii) increasing the revenues of core NQI organizations, particularly revenues related to measurement. The second option depends on either (a) increasing capabilities and entering new areas where demand exists, or (b) increasing the size of the market, so that more customers use the services of the NQI. The first requires significant budget allocations. Increasing the size of the market can be achieved either by expansion of the domestic market through new regulations, or by opening up to external markets by increased exportation of services (through acquired experience). Despite for example the existence of a National Standardization Strategy of CODONORM[46], at present guidance or a strategy in this area remains lacking.

The NQP of CDI identifies as a priority action to find resources boosting the functioning of the relevant NQI public bodies so that the directorates, offices, agencies and public committees linked to quality can really carry out their missions effectively.

In addition to the need for improved laboratory infrastructure, there seems to insufficient funding for market surveillance. Coverage of inspections for the whole of the market is rather thin. Consumer products insufficiently inspected or absent from the inspection perimeter, generates unfair competition vis-à-vis products that comply with standards and regulations, and causing poisoning or accidents, in turn generators of time and resources lost.

In order to sustain public awareness processes as well as transfer of know-how, additional funding is needed for a Training and Quality Center to serve the core NQI organizations. Funding to support such Training and Quality Center may still need to be identified. Also, Consumer Associations should be supported in playing their role in QI, help them develop internal sources of funding, and help them communicate effectively (conferences, publications, etc.).

[42] LANADA, the National Agricultural Development Support Laboratory.
[43] LNSP, Laboratoire National de Santé Publique.
[44] AGEDI, Agency for the Management and Development of Industrial Infrastructures.
[45] See also for example: Loi de Finance Portant Budget de l'etat pour l'annee 2019, Secretariat d'etat aupres du Premier Ministre, charge du budget et du portefeuille de l'etat. Annexe 3: budget de etablissements publics nationaux.
[46] Strategie Ivoirienne de Normalisation (2019-2021), CODINORM.

Annex I: NQI Côte d'Ivoire Assessment Table

Question	Comments
Quality Ecosystem	
Does this country have a NQI Policy?	Yes, Côte d'Ivoire has an NQI Policy. CDI's NQP project development began in December 2015 and was adopted on 16 June 2016. The final draft is in the process of being transmitted to the Ivorian Government, which should then set up its adoption process with a view to making it a national document. Ultimately, it will improve the legal framework for implementation and quality development, provide a tool for the development of quality development projects and finally facilitate the integration of the national economy with the economies of other ECOWAS states, as the NQP will be an elaboration of the ECOQUAL regional policy. Despite many priority actions identified in the Policy, for the time being, the NQI Policy seems to lack a clear NQI Strategy though.
When was it last updated?	It remains unknown when the NQI Policy was last updated. The final draft is in the process of being transmitted to the Ivorian Government, which should then set up its adoption process with a view to making it a national document.
Is the standards strategy in place and being implemented?	CODINORM has a draft National Standardization Strategy 2019-2021. The Strategy has not been implemented yet.
Is there a National Standards Body? Is the NSB internationally recognized?	Yes. The responsible entity is CODINORM, Cote d'Ivoire Normalisation. CODINORM has been member of ISO since 1997. More specifically, CODINORM is a member of the ISO Committee on Developing Country Matters (DEVCO), and the Affiliate Country Programme of the International Electrotechnical Commission (IEC). CODINORM is the national standards and certification body entrusted with the following tasks: • the development, registration and dissemination of Côte d'Ivoire standards; • the management of a national product certification and quality management system (ISO 9000 series); • the promotion of quality management in companies; • the management of a technical documentation collection and of a bookstore for standards and quality-related works; • the management of the national WTO enquiry point on standards and regulations; • the representation of Côte d'Ivoire in international standardization bodies.

	CODINORM is a member of: the African Regional Organization for Standardization (ARSO), the African Electrotechnical Standardization Commission (AFSEC), and the Regional Standardization, Certification and Quality Promotion Secretariat (NormCerq), Commission of WAEMU, and houses the regional secretariat for electrotechnical standardization.
Is there a National Metrology Institute?	Yes. The role of NMI is covered by LANEMA, the National Laboratory for Quality Assurance Testing, Metrology and Analysis.
Is there at least one internationally recognized accreditation body active in the country?	• Côte d'Ivoire does not have a National Accreditation Body for it because it is part of the community approach of the WAEMU to adopt the West African System of Accreditation (SOAC) followed by ECOWAS. Article 27 of Decree No. 2014-461 of August 6, 2014, relating to the application of Law No. 2013-866 of December 23, 2013 relating to standardization and promotion of quality, stipulates that the "Organization National d'Accréditation Ivoirien" is the regional SOAC accreditation body. The headquarters of SOAC are in CDI. • The accreditation of medical biology analysis laboratories is entrusted to the Regional Center for Health Assessment and Accreditation of Sanitary Establishments in Africa (CRESAC), a regional body created in April 2005 and whose headquarters is also in Abidjan, Côte d'Ivoire (for reference: Order No. 184/MSHP/CAB of October 26, 2010). • The National Accreditation Council of Tunisia - TUNAC: among other accreditation activities such as environmental chemistry processes for LANEMA, the three water and environmental chemistry laboratories in CDI are accredited ISO 17025 by TUNAC. • The Belgian Accreditation Body BELAC (Organisme Belge d'Accréditation) Belgian Accreditation Body) is active in biomedical analysis and medical testing and accredits the Longchamp Laboratory. • The French Accreditation Body COFRAC (Comité Français d'Accréditation) is, among others, active in the chemical and petrochemical sectors.
Is there at least one Conformity Assessment Body(s) active in the country?	Yes. The main CABs, public and private, in CDI include (this list is non-exhaustive): • LANEMA is an EPN dependent on the Ministry of Industry. It assumes many missions including the analysis and testing of conformity, metrological controls of measuring instruments, tests of electromechanical equipment, technical controls, physical physicochemical analysis, research and development, assistance and training, maintenance, control and repair of aircraft. The water and environmental chemistry laboratories are accredited ISO 17025.

	• LANADA, National Laboratory for Support to Agricultural Development, is an EPN under technical supervision by the Minister of Agriculture and Rural Development and economic and financial supervision by the Minister of Economy and Finances. It consists of five laboratories, responsible for monitoring animal health, the quality of food products (plant and animal) and seeds. It supports quality for animal and plant production and production conditions. • LACQUE/ONEP, Laboratory for Analysis and Control of Water Quality of the National Office of Drinking Water, is an ENP under the supervision of the Ministry of Economic Infrastructures. It is responsible for monitoring groundwater, surface water, and water distribution networks through physico-chemical and microbiological analyses. • INHP, National Institute of Public Hygiene, is an EPN under the supervision of the Ministry of Health and Ministry of Economy and Finance. It ensures national health policy related to general hygiene, prophylaxis, and control of transmissible endemics, the national technical directorate of the Expanded Program on Vaccination, teaching and research. • LNSP, National Laboratory of Public Health, is an EPN that is responsible for the conformity of products intended for consumption (medicines, dietetic products, para-pharmacy products, drinking water, foodstuffs), expert opinions (fraud, industrial, and forensic toxicological), and study of requests for laboratory accreditation of physio-chemical, toxicological, and biological expertise. • LBTP, Laboratory of Building and Public Works, is under the supervision of the Ministry of Economic Infrastructures, and intervenes in the fields of civil engineering, building, energy savings, industrial control, and safety inspections of low electrical installations voltage. The LBTP has existed since 1954 and in 2005 became a Public Limited Company with Majority Public Financial Participation (SAPFPM). It is ISO 9001 certified and has been the WAEMU reference laboratory since 2007. It is considering ISO 17025 accreditation for certain test activities (concrete). • LABOGEM, Geotechnics and Materials Laboratory, is a private laboratory specializing in studies and controls of soils and construction materials in civil engineering projects. • ENVAL, is a private laboratory focused on laboratory analysis (mainly microbiology and physio-chemistry) of the environment, soil and leaves, food, textiles, lubricants, air quality, acoustic and light, and mines. It also offers training and assistance services for certification to ISO 9001, 14001, 22000 and OHSAS standards. Its analysis activities for physicochemical, microbiological, and heavy metals are ISO 17025: 2012 accredited. It is

	approved by several ministries (Industry, Environment, Animal Resources and Fisheries) and is the ECOWAS reference laboratory for fishery products. • VAGNY LAB is a private laboratory created in 2005 focused on quality control of foodstuffs (production and distribution), environmental sanitation, marketing of equipment and laboratory products, and agro-food industries. It also trains agents in formal and informal sectors in the agro-food sector. • LBCA, Bio-Connex Analytical Laboratory, is a private laboratory specialized in microbiological and physio-chemical analyzes, hygiene in collective catering, and control of petroleum products. • Private analysis and testing laboratories such as those of SGS, Bureau Veritas, etc.
Are existing quality institutes (Standards Body, Metrology Institute, CABs, Regulatory bodies) separate or does one entity play multiple roles? Separation is key to identify conflict of interest.	The existing government NQI institutes are separated, by function. The DPQN however plays an oversight role. A conflict of interest could arise since the quality policy of Côte d'Ivoire is part of a perspective with multiple overlaps: ECOWAS and WAEMU zone, EPA with the European Union, AGOA with the USA, etc. This may cause conflicts of interest, both on the objective-side and on the actors-side.
Does the country have a national TBT/SPS committee?	With respect to TBT measures, CODINORM coordinates the formulation and approval of Ivorian standards and provides certification services in CDI. In principle, imports are treated in the same way as Ivorian products and must be accompanied by proof of their compliance with the technical regulations in force, issued by CODINORM. Nevertheless, there is neither control to ensure compliance with these regulations nor is the statutory time-frame for updating the standards and technical regulations being observed. With respect to SPS measures, the Ivorian regulatory framework for such measures appears to be outdated and fragmented. Côte d'Ivoire has not set up a risk management system for the purposes of SPS inspection at the customs cordon and its SPS certification system remains complicated, and not based on risk analysis.
Does the country have active trade associations and consumer interest groups?	Active trade(-related) associations are: • CGECI, the Private Sector Organizations' Federation • Agence Côte d'Ivoire PME • Chambre de Commerce et d'Industrie de Côte d'Ivoire (CCICI) • APEX-CI, Association for the Promotion of Export of Côte d'Ivoire • PROMEXA, Association pour la Promotion des Exportations Agricoles Non-traditionnelles de Côte d'Ivoire

	No less than sixty-nine consumer organisations of Côte d'Ivoire are organized in the National Federation of Consumer Associations of Côte d'Ivoire (FAC). It is a federation of national and local consumer groups created with the purpose of raising consumer rights awareness amongst the population.
Transparency	
Is there an active TBT/SPS Enquiry Point?	Yes. In CDI, CODINORM is the single, active TBT/SPS Enquiry Point.
How active are the Enquiry Points?	This is no known.
Where (in which ministry and office) are the Enquiry Points located?	The TBT/SPS Enquiry Point is located at the office of CODINORM.
Is there a national policy or guidance on the notification process?	Côte d'Ivoire has a National SPS Focal point and Notification Authority and documented Notifications are available.
Are draft regulations shared publicly prior to finalization?	No. There is no practice or system of prior announcement of laws or regulations.
Is there a National Gazette?	Texts in use in CDI are published in the Official Journal ("Journal Officiel"), which is the legal announcement journal of the State. Nevertheless, because of structural difficulties, the Official Journal is not published within the period of publication of legal acts. To overcome this difficulty, it is possible to resort to the general secretariat of the government to get certified copies, or to refer to archives of National Assembly to gain access to preliminary working acts, debates, and texts of laws.
Does the country maintain an online resource for sharing draft regulations for comment?	No. There is no know online consultation facility, concerning regulations.
Technical Regulations	
Does country have existing regulatory framework?	Yes. There are many Technical Regulations. These are rather fragmented and distributed over many ministries. The following actions are required: • Update legislative and regulatory texts to: - adapt to regional and international text; - clarify the responsibilities of regulatory bodies and inspection with acknowledging the reality on the ground and assigning the proper areas of competence of each; - put in place a framework for consultation and coordination of inspection agencies.

	• Ensuring the powers independence and impartiality of control and inspection agencies, essential to the accomplishment of their missions, with sufficient resources to ensure their roles; • Align the operation of control and inspection bodies in a quality approach according to the ISO 17020 standard.
Is there a regulatory oversight body?	No. There is no regulatory oversight body, as such. There are several sectoral regulatory authorities (such as in the utilities sectors). Through the departments of the Directorate of Metrology, Quality Control and Fraud Prevention (DMCQRF) and Trade Regulation Directorate (DRE), the Ministry of Trade, Industry and SME Promotion oversees the application of technical regulations.
Is there an existing mandate for regulators to perform RIA?	No. In CDI there is no known consistent RIA-practice.
Do regulators review the impacts of their regulations during the drafting process?	No. Such practice is not known.
Is the private sector consulted in the development of regulations? Are they able to review or comment on regulations before they are finalized?	No. There is no system of private sector consultation concerning the review of, or comment on regulations. Several bodies have private sector participation though, such as CODINORM and CIN (see below).
How can the private sector be involved?	CODINORM is a non-profit public interest association. It was jointly established by the private sector and the State on 24 September 1992. It is managed by a Board of 23 members, 14 of which are from the private sector and nine from the State. he CIN also have representation of private sector. On top of that, there are (delegations of) the regional Quality Infrastructure players. The association has 206 member companies as of 1st February 2019. The draft NQP identifies a priority action to develop concertation and exchange between associations and public institutions in order to reach a sectoral consensus of operators, build partnership networks (private/private, private/public) and group associations into federations to strengthen their participation in different levels of decision making, including regulation.
If an organization or government entity disagrees with a regulation, are there mechanisms to amend the regulation?	There are no known instituted, formal feedback mechanisms on (proposed) regulations in CDI.
Conformity Assessment and Accreditation	

Does country have a conformity assessment or certification policy?	Côte d'Ivoire has established a conformity assessment procedure (VOC), with a view to combating fraud and the counterfeiting of certain products. This program has been operating since January 2019 and covers both food and non-food products.
Does the NSB or another body conduct certification of products?	CODINORM is responsible for certifying products and attributing them with a national trademark and a declaration of conformity with standards.
Does the NSB or another body conduct certification of systems/processes?	In the Action Plan "Plan d'Actions Issu du Plan Stratégique 2020-2022" of CODINORM, the following actions with regard to Certification are included: • Strengthen communication with importers, freight forwarders and customs • Identify and sign partnerships with organizations managing product information. • Sign a recognition agreement of the NI-mark with other foreign brands, as needed for national economic operators in import/export. • Collaboration agreements with technical ministries. • Agreement with Agence Côte d'Ivoire-PME (Ministry responsible SMEs). • Establish collaboration with public markets. • Mutual recognition between CODINORM and the entities competent per destination • Validation of compliance of products by CODINORM. • Submit to the CNE certification programs (standards, regulations, projects, etc.) for the products concerned, as part of the National Export Plan. • Create an Inspection Service (according to ISO 17020). • Set up the device extension of accreditation for identified products as part of the Accreditation Program and CODINORM certification (ISO 17065, ISO 1702O and ISO 17024).
Is the national certification body regionally recognized?	CODINORM, as the certification body, is regionally recognized.
Is information on requisite national certification clear and easily available?	CODINORM requires that all products made in CDI demonstrate proof of compliance with applicable laws and norms. Specifically, Norme Ivoirienne (NI) labeling, or a certificate of compliance delivered by a certification product body accredited on the basis of an international standard (such as ISO/CEI 65 OR EN 45011), is required. Otherwise, there are inspection certificates and certificates of conformity in place for international trade (import/export). Information is readily available.
Is there a national scheme in place for the certification of Quality Management Systems (QMS)?	CODINORM is entrusted with the management of a national product certification and a quality management system (ISO 9000 series) scheme.

Does the country participate in the ILAC Mutual Recognition Agreement (MRA) for certification?	Since August 2018, regional accreditation body Systéme Ouest Africain d'Accréditation (SOAC), and with that member state Côte D'Ivoire, is welcomed as an Affiliate member of ILAC..
Standards	
Does this country have a national standards body?	• CODINORM (Côte d'Ivoire Normalisation) is a non-profit association, recognized for public utility, created on September 24, 1992. • Decree nº 2014-460 makes the Ivorian Committee for Standardization (CIN) the National Organization for Standardization • ONN - created by article 10 of Law 2013-866 of December 23, 2013 relating to Standardization and Quality Promotion). Part of the missions of the ONN is conceded to CODINORM • The DPQN (Quality Promotion and Standardization Department) is a central administration department created in June 2001. The DPQN has the following objectives: - Promote quality culture in CDI; - Ensure institutional quality coordination; - Play the role of the national quality observatory; - Strengthen the framework for consultation and cooperation between the State and the private sector in the area of quality; - Strengthen institutional, financial and logistical capacities in the area of quality.
Is there a national standards strategy or annual standards report?	CODNIORM has a draft National Standardization Strategy 2019-2021. The State signed an agreement with CODINORM recognized as a concessionary structure for standards. Decree 2014-460 stipulates in Article 12 that the activities conceded to the concessionary structure are monitored and controlled by the CIN and by the Ministry in charge of industry through audits and analysis of the annual report that CODINORM must transmit to the guardianship. The National Standardization Strategy was initially designed by CODINORM based on the methodology of the International Organization for Standardization (ISO). The draft Strategy was widely distributed to 145 private and public organizations including the ministries to collect their contribution to the draft document.
Is the NSB independent (without oversight, can adopt/revoke standards, determine worker salaries, determine own funding,	CODINORM is monitored and controlled by the CIN and by the Ministry of trade, Industry and SME Promotion, specifically the Directorate of Promotion of Quality and Standardization (DPQN). Decree 2014-460 stipulates in its Article 10 that the State may concede the exercise of the activities of the CIN to any structure it deems competent through an agreement. Thus,

initiate new actions, determine service fees)?	the State signed an agreement with CODINORM recognized as a concessionary structure for standards. Funding mostly comes from public budget. The National Standardizaton Strategy proposes a more inclusive funding mechanism with regard to "the challenges of standardization activity". One of the Objectives of the Strategy is to "increase mechanisms and sustainable funding sources to support standardization activities by determining the main funding needs, as well as possible sources of funding".
Where is the NSB housed/located in the government?	CODINORM has an independent, autonomous location, at the 2 plateaux rue K 115 villa 195 (repère sococe 2 plateaux), Boulevard des Martyrs, Abidjan, Côte d'Ivoire.
Is the NSB a member to ISO/IEC and/or Regional Standards bodies?	Yes. CODINORM is both member of ISO/IEC as well as regional standards bodies.
Does the NSB have existing twinning relationships?	Not to current knowledge.
Does the NSB recognize standards of regional/international standards bodies?	The National Standardization Strategy was initially designed by CODINORM based on the methodology of the International Organization for Standardization (ISO). This means for example that for the prioritization in the development of standards, four criteria are to be taken into account: - Economic importance of an industrial sector (economic weight of a sector, role in exports/imports). - Social importance (impact on health and safety, role in employment, environmental impact). - Future needs, as stated in national development plans/policies. - Stakeholder opinion on the need for specific standards (in each sector). Furthermore, the Strategy states: "With the National Standardization Plan (PNN), Ivorian standardization responds to the changing situation and to the new requirements of a globalized world".
NSB oversees robust standards development process (with openness, balance, due process, consensus mechanisms)?	This strategy takes into account the public policy and all sectoral development programs to ensure consistency with the standardization work. The Strategy adopts a vision, based on the deployment of the methodology of the International Organization for Standardization ISO, which will make it possible to prioritize the list of subjects and standards required. The Strategy also proposes an establishment of a mechanism to deal with new issues related to standardization (for example relating to anti-corruption management, sustainable development of territorial communities, etc.).

How often are standards reviewed/updated?	The Standards are included in the Programme Triennal de Normalisation 2019-2021, issued by CODINORM.
Are standards available/accessible?	Yes. Standards are readily available. As an ISO-member, CODINORM has also full access to the ISO-database of standards.
Does the NSB have a formal policy to adopt international standards?	Most of the listed standards in the Programme Triennal de Normalisation 2019-2021 are based on ISO, CODEX, IEC, CAC, and NI[47]. The Strategy adopts the deployment of the methodology of the International Organization for Standardization ISO.
Existing standards in standards catalogue? (annual updates on adopted standards)	Yes. The Standards are included in the Programme Triennal de Normalisation 2019-2021, issued by CODINORM.
Metrology	
Does the country have national metrology institute (NMI)?	Yes. The role of NMI is covered by LANEMA, the National Laboratory for Quality Assurance Testing, Metrology and Analysis.
Does the NMI have a national metrology strategy?	Côte d'Ivoire has no known metrology strategy nor, as it has appeared, an effective metrology system. As an illustration, the Office of Instruments and Measures (BIM) responsible for legal metrology still needs to be set up, as the same goes for the National Metrology Laboratory (LNM), concerned with industrial and scientific metrology.
TBT/SPS at national/international level	
Which ministry/agency leads TBT issues?	CODINORM is the leading CDI organization when it comes to the WTO membership, it is the WTO Entry Point. Year of acceptance of WTO TBT Code is 2001. Scope: all sectors to ISO, IEC and Telecommunications Industry Standards. In 2015, Côte d'Ivoire also set up a National Inter-Institutional Advisory Committee on WTO Agreements (established in Article 6 of Decree No. 2015-115 of 25 February 2015). Since 2015, Côte d'Ivoire has had a domestic SPS/TBT sub-committee, which is part of this Advisory Committee on WTO Agreements.
Who is the lead organization to the WTO for TBT?	CODINORM represents Côte d'Ivoire in regional and international standardization bodies, and acts as the national enquiry point for standards and technical barriers to trade (TBT) for the WTO.
Does the country participate at the WTO TBT Committee?	With regard to trade negotiations and participation in the various WTO committees, Côte d'Ivoire in principle coordinates its position with those of the other WAEMU and ECOWAS member countries. ARSO, The African Organisation for Standardization is admitted as an

[47] The National Conformity Mark (NI) is a license that CODINORM issues to a manufacturer who has put in place the provisions allowing to permanently guarantee the conformity of his product with the applicable Ivorian standards.

	Observer Organization of the WTO-TBT Committee in November 2015, CDI is one of the 21 member-countries of ARSO.

Annex II: Main References

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