WHO Global Benchmarking Tool (GBT) for evaluation of national regulatory system of medical products

# Manual for benchmarking and formulation of institutional development plans

World Health Organization

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WHO Global Benchmarking Tool (GBT) for evaluation of national regulatory system of medical products: manual for benchmarking and formulation of institutional development plans

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# Contents

# Foreword

This manual is intended to provide clear operational guidance on the benchmarking of regulatory systems for medical products and the development of institutional development plans (IDPs) to address areas for improvement.

The manual is integral to the World Health Organization's structured and evidence-based approach to regulatory systems strengthening (RSS), mandated by World Health Assembly resolution WHA 67.20. The manual serves to ensure a proper understanding of the Global Benchmarking Tool (GBT); the processes and principles that govern its use; the expectations of individuals and institutions involved; and the information management systems that underpin the collection, analysis and management of data and the generation of knowledge.

The manual, together with supplementary procedures and detailed guidance referenced herein, constitutes a comprehensive body of work that defines the end-to-end regulatory system's strengthening process and the quality management system under which it operates.

Just as the benchmarking tools used to evaluate regulatory systems have evolved since the inception of the RSS programme, so too have the corresponding manuals that govern their application. This document builds on previous manuals that describe the planning, conduct, follow-up and management of benchmarking activities; the roles and responsibilities of WHO team members; and the principles that guide the overall process. It also embodies the distillation of recommendations from international consultations and workshops on benchmarking policy, tools, methodology and procedures, as well as the collective experiences of global regulatory authorities and WHO, with the five-step model for strengthening regulatory systems.

Importantly, this manual consolidates, updates, and elaborates material from previous manuals. It also introduces important concepts related to regulatory maturity level and their assignment, transparency, and Good Regulatory and Reliance Practices.

This manual will continue to evolve to reflect experience gained, best practices and a process of continuous improvement. The manual is subject to regular updates to take account of: the latest policy and operating guidance for evaluating and designating regulatory authorities as WHO-listed authorities; the WHO Global Competency Framework for Regulators of Medical Products; and a framework for collaboration with external entities through WHO's network for RSS: the Coalition of Interested Parties.

WHO would like to thank everyone who has supported the WHO RSS programme and contributed to the development of the GBT and this manual.

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- Pandemic Influenza Preparedness Framework
- United States Food and Drug Administration
- United Nations Children's Fund

# Acronyms and abbreviations

| | |
|---|---|
| **cGBT** | computerized Global Benchmarking Tool |
| **DOI** | Declaration of Interests |
| **GBT** | Global Benchmarking Tool |
| **GBT+** | Global Benchmarking Tool Plus |
| **GBTQI** | Global Benchmarking Tool Quantitative Indicators |
| **GMP** | Good Manufacturing Practice |
| **IDP** | institutional development plan |
| **iIDP** | initial institutional development plan |
| **ISO** | International Organization for Standardization |
| **ML** | maturity level |
| **NA** | not applicable |
| **PAHO** | Pan American Health Organization |
| **PDMP** | plasma-derived medical products |
| **RSS** | regulatory systems strengthening |
| **TOR** | term of reference |
| **WHA** | World Health Assembly |
| **WHO** | World Health Organization |
| **WLA** | WHO listed authority |

# 1 Introduction

The benchmarking of regulatory systems referred to in World Health Assembly resolution WHA 67.20 implies a structured and documented process, by which Member States can identify and address gaps, with the goal of reaching a level of regulatory oversight commensurate with a stable, well-functioning and integrated regulatory system.

The World Health Organization (WHO) Global Benchmarking Tool (GBT) is the primary means through which WHO assesses regulatory systems for the regulation of medical products. The tool and benchmarking methodology enable WHO and regulatory authorities to: identify areas of strength and areas for improvement; build on strengths and address gaps by formulating an institutional development plan (IDP); prioritize investments in IDP implementation; and monitor progress.

WHO began assessing regulatory systems in 1997 using a set of indicators designed to assess the regulatory programme for vaccines. Since that time, several tools and revisions have been introduced, and the regulatory systems of more than 150 countries have been benchmarked.

The development of a unified WHO GBT for the assessment of medicine and vaccine programmes began in 2013. This followed a mapping of benchmarking tools internal and external to WHO, with a view to ensuring policy coherence, maximizing regulatory outcomes and reducing the burden on regulatory authorities.

The GBT replaces all tools previously used by WHO, representing the first truly “global” tool for benchmarking regulatory systems.

This manual is structured in a way to help readers understand the context of benchmarking activities and to give them an in-depth understanding of the GBT, as well as the processes and procedures related to planning and scheduling, preparation, conduct and reporting of benchmarking activities, and the formulation of IDPs.

Given the considerable size of this manual, readers are strongly advised to use the table of contents to navigate their way through. Readers should also note that this manual is not a standalone document. Rather, it is complemented by other relevant manuals and procedures. When appropriate, readers should refer to other documents that may enhance understanding and support suitable implementation of the relevant processes.

Queries related to this manual or associated documents, including the GBT, should be addressed to the WHO Regulatory Systems Strengthening (RSS) team: nra_admin@who.int

# 2 Objectives

The objectives of this manual are to:

- familiarize WHO staff, experts and consultants, national regulatory authorities (NRAs) and other parties – including national control laboratories, the national immunization programme, ethics committees and ministries of health – with the overall benchmarking process by highlighting the relevance of the GBT for:

  a) identifying the strengths and gaps of regulatory systems;
  b) demonstrating the need to formulate IDPs;
  c) monitoring the implementation of IDPs as part of the RSS; and
  d) documenting how expected outcomes were achieved

- provide guidance on all aspects of the WHO benchmarking process through a self-benchmarking, assisted self-benchmarking or formal benchmarking of the regulatory system. The manual:

  - provides detailed guidance on the formal benchmarking activities, including the procedures and timelines for planning, conducting, following up and documenting the benchmarking of regulatory systems based on the WHO GBT;
  - defines the composition of benchmarking teams, as well as the required competencies, roles and responsibilities of team members; and
  - describes the roles and responsibilities of the three levels of WHO (headquarters, regional offices and country offices) in the benchmarking of national regulatory systems and the formulation of IDPs.

This manual should be read in conjunction with other relevant manuals and standard operating procedures, as listed in Annex 1. Training materials on the use of the tool and the conduct of benchmarking activities are being developed to complement the manual.

As part of the quality system approach applied by WHO, this manual is subject to periodic review and revision (see Section 5.4 for more details).

# 3 WHO RSS programme

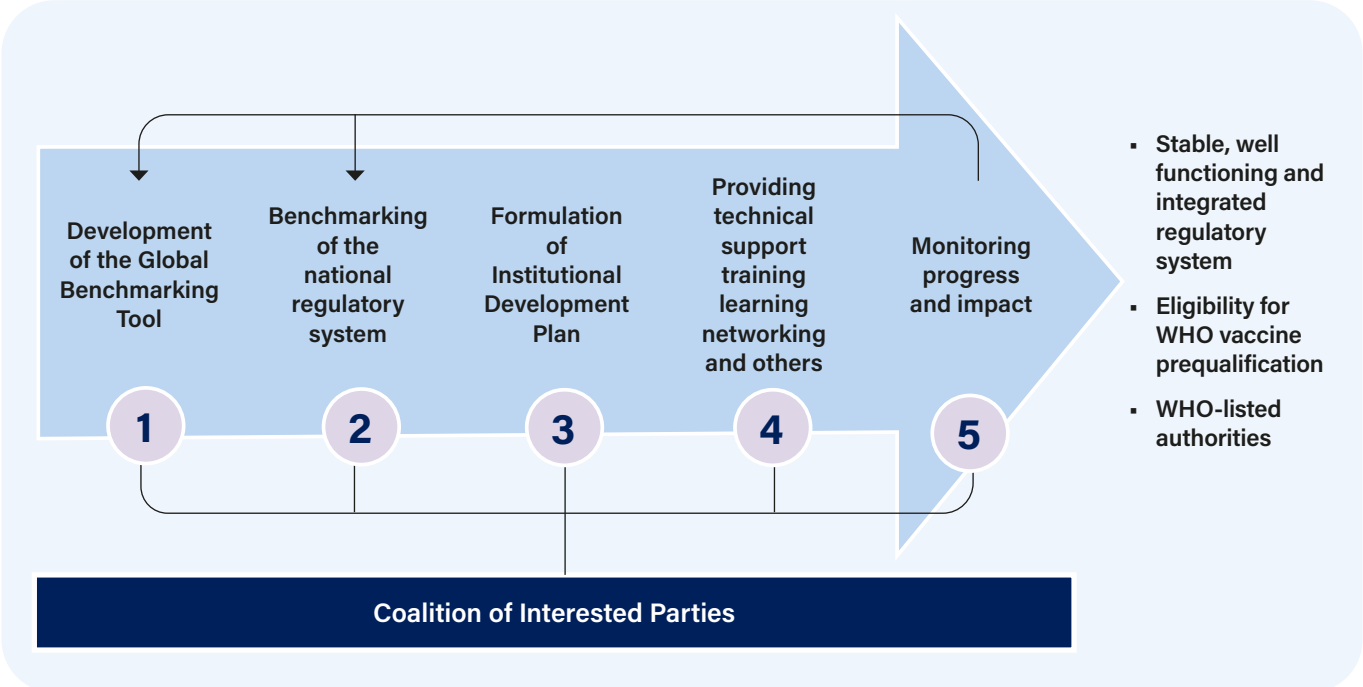
The objectives of the WHO RSS programme are to:

- promote regulatory cooperation, convergence and transparency through networking, work-sharing and reliance; and
- build regulatory capacity in Member States consistent with Good Regulatory Practices.

To this end, WHO, over the last three decades, has established, implemented and refined a five-step model for strengthening regulatory systems (see Fig. 1).

1. Development and maintenance of a benchmarking tool (that is, the GBT) for assessing national regulatory systems
2. Benchmarking of regulatory systems
3. Formulation of IDPs for continuous improvement
4. Capacity-building through technical support, training and networking
5. Continuous monitoring and documentation of programme outcomes and impact

**Figure 1** **WHO five-step model for strengthening regulatory systems**




The WHO GBT consists of a well-structured hierarchy of indicators, sub-indicators and accompanying fact sheets, which can be accessed at the following WHO webpage: https://www.who.int/tools/global-benchmarking-tools

The GBT also incorporates the concept of "maturity levels" (MLs), adapted from the international standard ISO 9004:2018. This concept is not new within the context of regulatory systems benchmarking; it has been implemented since 20041 through the Benchmarking of European Medicines Agencies (BEMA). It has also been extensively discussed within WHO and at international consultations organized by WHO in January and December 2015.

By applying the concept of maturity levels according to a well-defined algorithm, regulatory authorities can ascertain their level of development or "regulatory maturity". The maturity level classification also allows for the identification of more advanced systems that should, in turn, facilitate reliance and greater regulatory cooperation.

Maturity of regulatory systems is divided into four levels, characterized as follows:

- ML1: regulatory systems in which some elements of regulatory systems exist – corresponds to "no formal approach" (ISO 9004:2018);
- ML2: evolving national regulatory systems that partially perform essential regulatory functions – corresponds to "reactive approach" (ISO 9004:2018);
- ML3: stable, well-functioning and integrated regulatory systems – corresponds to "stable formal system approach" (ISO 9004:2018); and
- ML4: regulatory systems operating at advanced level of performance and continuous improvement – corresponds to "continual improvement emphasized" (ISO 9004:2018).

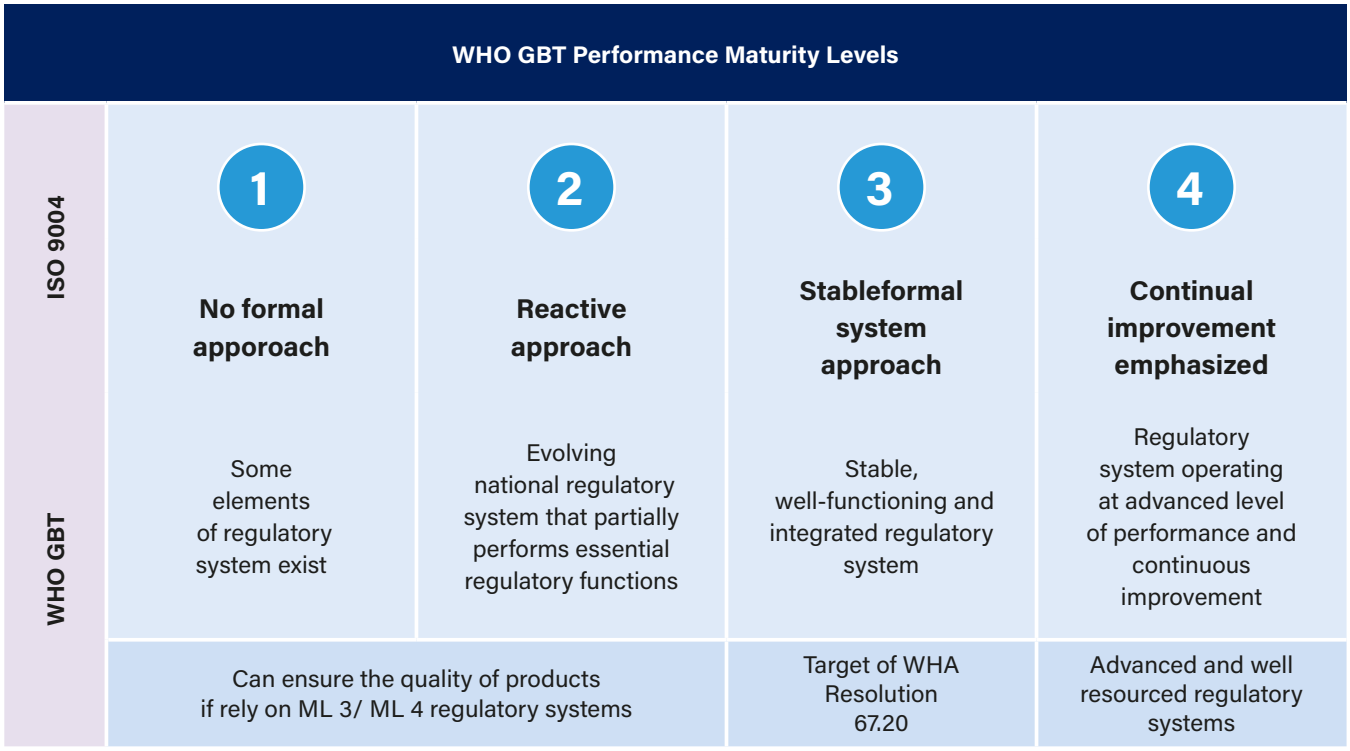
The goal of RSS work is to help ensure the availability of safe, effective and quality medical products by assisting countries to reach and sustain a level of regulatory oversight that is effective, efficient and transparent. This equates with maturity levels 3 and 4 (see Fig. 2).

Flexibility was introduced into the GBT to allow for better adaptation to various regulatory situations, while maintaining the robustness of benchmarking measurement and the assignment of maturity level. Flexibility is provided through a variety of measures, including the maturity level algorithm, application of "not applicable" indicators and customization of the GBT, as described in this manual.

WHO recognizes that it may not be realistic for the bodies charged with regulatory oversight in some Member States to achieve ML3 in all regulatory functions – for example, in the case of low-resourced regulatory systems. In such situations, efforts should be focused on establishing and strengthening critical, value-adding regulatory functions (for example, product registration; licensing of establishments involved with the manufacture, importation, storage and distribution of medical products; medical products vigilance; and market surveillance and control). To provide assurance of the quality and safety of supplied medical products, extensive reliance on other advanced regulatory authorities, international organizations or regulatory networks is recommended. This includes reliance on the WHO Prequalification Programme for products that address priority public health diseases, such as malaria, tuberculosis and HIV/AIDS. (See also Section 6.10.1: Benchmarking of regulatory functions in different regulatory settings.) In all cases, when applying reliance, it is advised to adhere to best practices, as specified in the WHO guidelines on Good Reliance Practices.

1 https://www.hma.eu/bema.html

**Figure 2** **Maturity levels as defined by WHO**




WHO has established an RSS network called the Coalition of Interested Parties. The Coalition is a collaborative model for RSS with a view to optimizing regulatory outcomes by coordinating the efforts of development organizations (including mature regulatory authorities) and donors interested in promoting access to safe, effective and quality-assured medical products in a targeted country or region. The Coalition's activities span the life cycle of RSS efforts, including benchmarking of regulatory systems; assisting in the formulation and implementation of strategic plans, regional plans and IDPs; providing technical support; and monitoring the progress of regulatory systems at defined milestones. The Coalition is a voluntary collaborative mechanism that will operate within and according to the terms of reference that have been developed.

# 4 Country requests and prioritization model for RSS

Resolution WHA 67.20 stresses the importance of providing RSS support "particularly for developing countries" upon a Member State's request. The same resolution expresses concern regarding "the impact on patients of medical products of compromised quality, safety and efficacy, in terms of poisoning, inadequate or no treatment, contributions to drug resistance, the related economic burden, and erosion of public trust in the health system".

Formal benchmarking is most commonly requested by countries for one of two reasons: 1) to provide a detailed picture of the regulatory system's maturity, strengths and areas for improvement, thereby serving as a roadmap for RSS; or 2) to provide support for official recognition by WHO in the context of achieving ML3 or for a public designation as a WHO listed authority (WLA).

When determining the response to Member States' requests for capacity-building and RSS, WHO acknowledges that it serves as a secretariat to Member States and must consider all requests received. However, when prioritizing efforts and investments through the RSS programme, WHO must also consider the impact on access to safe and quality-assured medical products, given limited resources and growing demand.

The following factors should be considered when prioritizing country requests for capacity-building to strengthen regulatory systems. This list is not meant to be inclusive or mutually exclusive, nor is it ranked in terms of priority. The relative weighting and translation of these considerations into regional work plans will take place through a joint country support planning process involving the three levels of WHO (headquarters, regional offices and country offices). Plans and activities are dependent on the availability of resources and may be subject to change, including urgent or unforeseen requests.

Considerations that may prioritize country requests to strengthen their regulatory systems include:

- low- or middle-income country with significant capacity for the production and export of medical products or with the potential to develop such capacity – within this category, further priority is given to countries that are a source of prequalified medical products and active pharmaceutical ingredients;
- country transitioning from United Nations or other global procurement model to self-procurement, taking into consideration the associated risks to the continued supply of quality-assured medical products (notably, prequalified medical products);
- country that is serving, or has good potential to serve, as a regional or international reference authority, including a regulatory authority that is seeking to be recognized as a WLA;[2]

2 Member States, in WHO consultations on the introduction of the WLA framework, noted the need for clear prioritization of efforts and for dedicated, supplemental funding. They also agreed that the low regulatory performance of a majority of WHO Member States constitutes a global public health risk and underscored the need to maintain RSS in these countries as a priority.

- country for which benchmarking and capacity-building would be geared towards regulatory harmonization, reliance and work-sharing through regulatory networks;
- country that is prone to or severely affected by public health emergencies (for example, pandemics or shortages) or that has a vulnerable public health system, and thus needs to prepare for rapid action, including access to required medical products;
- low-income country with either a weak regulatory system or no regulatory system for medical products; and
- country or region supported by other development agencies where a Coalition of Interested Parties approach may be adopted, or where collaboration with public health programmes can advance comprehensive, coordinated RSS efforts.

Underpinning all these considerations is evidence of the government's strong and sustained commitment to making the necessary investments in its regulatory system, adopting international standards and best regulatory practices, and practising good governance. The latter considerations should serve as eligibility (rather than prioritization) criteria for WHO when planning for and deciding on responses to requests for RSS and Member State capacity-building.

# 5 Global Benchmarking Tool (GBT)

The GBT serves as the tool to benchmark Member States' regulatory systems for a variety of product types, including medicines, vaccines, blood products (including whole blood, blood component and plasma-derived products) and medical devices (including in vitro diagnostics). This is made possible by introducing supplemental criteria to a common set of criteria initially developed for medicines and vaccines in the GBT. In order to accommodate the specificities of blood products and medical devices, the GBT Plus (GBT+) was released.

WHO defines a national regulatory system in terms of the enabling legal system and infrastructure, common regulatory functions, and non-common regulatory functions (see Fig. 3).

Seven common functions apply to the regulation of all medical products:

- registration and marketing authorization (MA)
- vigilance (VL)
- market surveillance and control (MC)
- licensing establishments (LI)
- regulatory inspection (RI)
- laboratory testing (LT)
- clinical trials oversight (CT).

Several other functions apply only to certain medical products. These non-common functions include:

- NRA lot release (LR) for vaccines, plasma-derived medicinal products (PDMPs) and blood-related in vitro diagnostics;
- approval of blood and blood components, including plasma for fractionation (product and/or process approval) (AB); and
- regulatory oversight of blood products, associated substances and medical devices, including in vitro diagnostics (RM).

Fig. 3 illustrates the aforementioned regulatory functions and their application across the medical product life cycle.

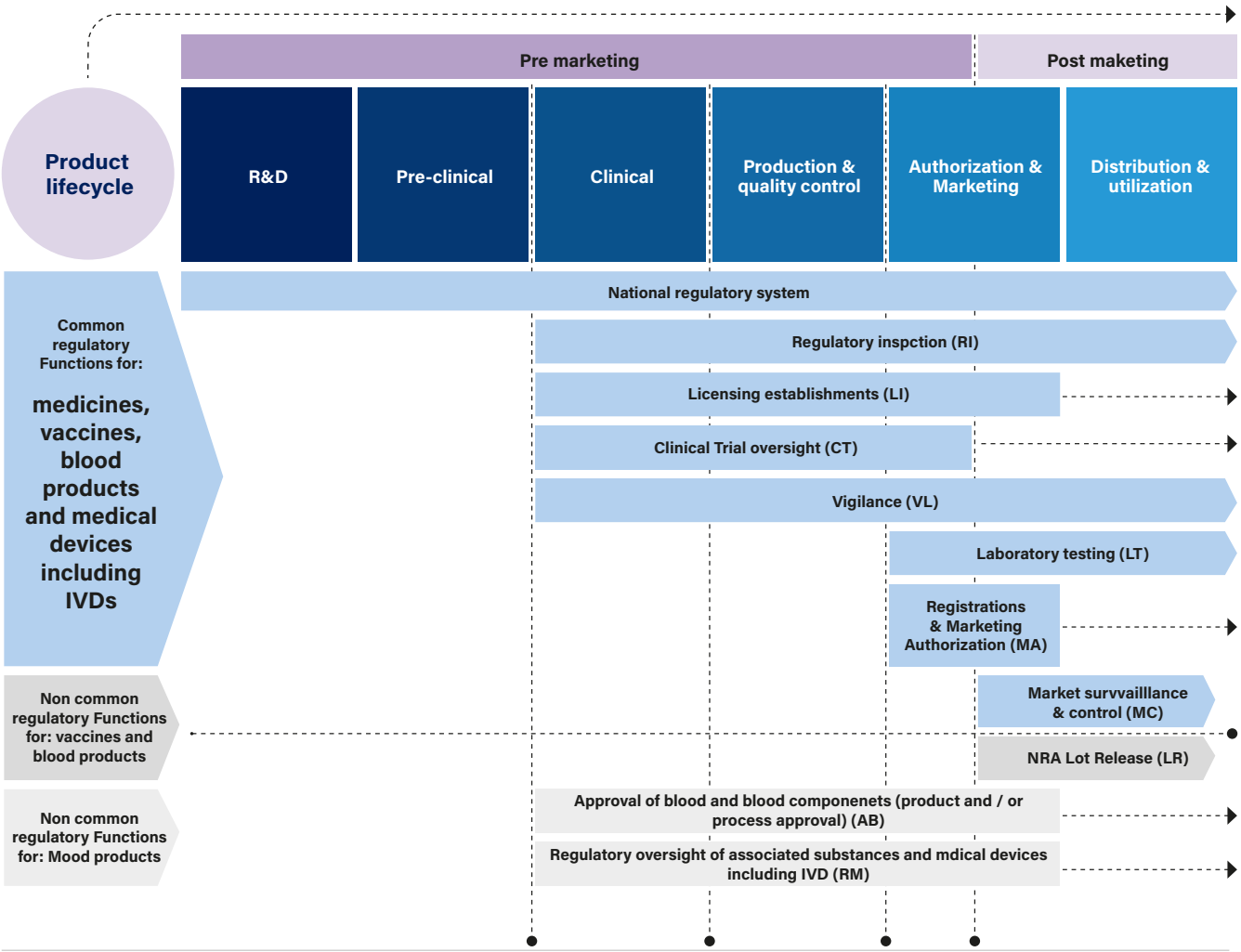
These functions may be undertaken by one or more institutions reporting to the same or different senior official(s). When functions are distributed across institutions, how well the designated regulatory bodies perform as an integrated system is determined in large part by the degrees to which these institutions communicate effectively and have mandates clearly defined in law.

It is important to distinguish here between terms in common use, as they have direct implications on benchmarking.

The body legally mandated to regulate the aforementioned functions is commonly known as the "regulatory authority" or "national regulatory authority" (NRA).[3] These terms imply that a single organization is responsible for all regulatory functions. As mentioned earlier, this is often not the case. Furthermore, depending on the product type, different bodies may be legally responsible for, for example, the regulation of medicines and vaccines, as compared to medical devices.

Even when one body is responsible for examining all regulatory functions, some aspects critical to certain functions may lay outside the authority – for example, those functions performed by pharmacovigilance centres that have a formal relationship with the authority to collect adverse event reports. This could include immunization programmes for vaccines. Furthermore, certain regulatory functions may be undertaken by third parties, as in the case of auditing organizations that perform some functions related to medical devices.

**Figure 3 Common and non-common regulatory functions across product life cycle for medicines, vaccines and medical devices, including in vitro diagnostics and blood/blood products**




[3] Other used terms include national drug authority (NDA), national medicine authority (NMA), national medicine regulatory authority (NMRA) and Drug Regulatory Authority (DRA). RA or NRA are the preferred terms for the purposes of benchmarking given their applicability to all medical products.

Another consideration relates to the fact that most regulatory authorities practice "reliance" – whereby the NRA in one jurisdiction considers and gives significant weight to assessments performed by another NRA or trusted institution, or to any other authoritative information, in reaching its own decision. The relying authority remains independent, responsible and accountable regarding the decisions taken, even when it relies on the decisions and information of others. In some cases, this could also take the form of reliance on supranational entities or other regulatory systems. Further details and guidance on this subject can be found in the WHO guidelines on Good Reliance Practices.

Given these considerations, the term "regulatory system" is used to describe the combination of the institutions, processes, regulatory framework and resources that, taken together, are integral to the effective regulatory oversight of medical products in a given country or multi-country jurisdiction. Patients, consumers and the general public make no distinction among the various elements of a regulatory system, provided the overall system works well.

## 5.1 Scope of the WHO GBT

With respect to the products covered, the scope of the current GBT (revision VI) has been developed for use in benchmarking regulatory systems for:

1. medicines;
2. vaccines;
3. blood products, including whole blood, blood components, plasma for fractionation, PDMPs and blood-associated substances; and
4. medical devices, including in vitro diagnostics.

With respect to the institutions covered, the GBT is intended for use in benchmarking regulatory systems at the national and subnational (for example, federal, provincial or state) level. The GBT is also applicable with some modification for use in the benchmarking of supranational (for example, regional) regulatory systems.

The GBT is designed to assess the inputs (such as legal framework, organizational structure and available resources), processes and intended outputs, in order to determine the maturity of a regulatory system. GBT indicators stipulate that staff within a regulatory system should possess the necessary competencies to perform their respective duties; however, the GBT does not generally define or directly assess expected competencies. These are assessed indirectly through regulatory outputs, or directly through observed audits of regulatory inspections or vigilance field visits.

It is worth noting that WHO has developed a Global Competency Framework for Regulators of Medical Products that aims to harmonize workforce development efforts for the regulation of medical products by establishing an internationally accepted set of competencies, which will guide the development of an organization-specific competency framework. The Global Competency Framework complements the GBT by providing competence criteria that can be used to assess an NRA's workforce for areas of improvement and develop training and development plans, which can be included in the IDP for the purpose of RSS.

## 5.2 Structure of the tool

The GBT is structured into four levels (see Fig. 4):

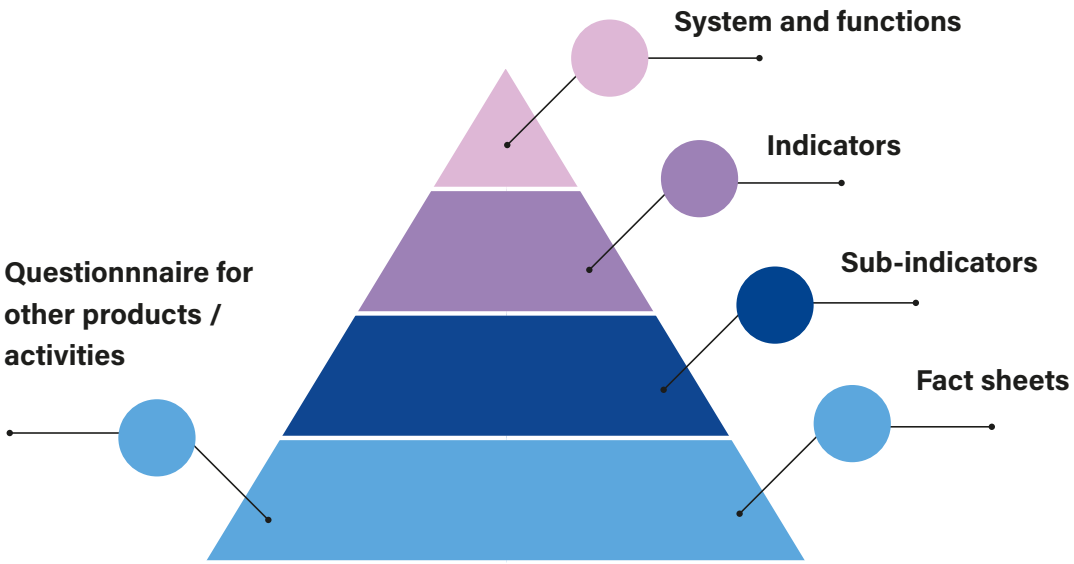
1. national regulatory system and regulatory functions
2. indicators
3. sub-indicators
4. fact sheets and questionnaires for other products and activities.

Sub-indicators and accompanying fact sheets represent the basic blocks of the tool. Each regulatory function is assessed through a set of sub-indicators. Sub-indicators are grouped under a parent indicator that aids data compilation and analysis.

The GBT groups indicators into nine categories:

1. legal provisions, regulations and guidelines
2. organization and governance
3. policy and strategic planning
4. leadership and crisis management
5. transparency, accountability and communication
6. quality and risk management system
7. regulatory process
8. resources (human, financial infrastructure, equipment and information management systems)
9. monitoring progress and assessing impact.

**Figure 4** **Overview of GBT structure**



## 01- National regulatory system

The national regulatory system provides the framework that supports the World Health Organization (WHO) recommended regulatory functions. The National Regulatory Authority (NRA) is the institution in charge of assuring the quality, safety, and efficacy of medical products as well as ensuring the relevance and accuracy of product information. A sustainable, well-functioning regulatory system will ensure an independent and competent oversight of medical products.

**Indicator:** RS02 Arrangement for effective organization and good governance.

**Objective:**

The objective of this indicator is to ensure that arrangements for effective organization and good governance are in place. Good governance is an essential factor for economic growth and sustainable development at all levels, and within all sectors, of society. The term "good governance" is increasingly used to emphasize the need for governance to operate with due regard for the rule of law and especially in a manner that is free from corruption. There is also growing consensus on the major characteristics of good governance. Good governance is participatory, consensus-oriented, accountable, transparent, responsive, effective, efficient, equitable, inclusive and follows the rule of law.

**Category:** 02. Organization and governance

**Sub-indicator:** RS02.04: Independence of NRA from researchers, manufacturers, distributors and wholesalers, as well as from the procurement system

**Maturity level: 2**

**Scope:**

1. Medicines
2. Vaccines
3. Blood products (whole blood, blood components and PDMPs)
4. Medical devices (including in vitro diagnostics)

**Description:**

The assessor should identify documented evidence that demonstrates the independence of NRA decision-making from researchers, manufacturers, distributors, wholesalers as well as from procurement institutions involved in acquiring different medical products.
For example, the control laboratory of a manufacturer must not perform the quality testing on behalf of the NRA when quality testing is deemed necessary by the NRA (e.g., for the purpose of post-marketing surveillance or NRA lot release, if applicable). Another example is that the decision-making bodies should not include or be influenced by experts who represent institutions interested in marketing of medical products. If the Ministry of Health or other governmental authority is responsible for procuring medical products in the country, documented evidence should be provided that NRA decision-making is independent from the organization or office that is responsible for procuring the products.

Aspects to consider when assessing whether the objectives of the indicator have been met:
1. Determine whether the duties assigned to the NRA include research, manufacture, or distribution of medical products;

2. Examine the hierarchical level of the NRA and verify that the NRA is independent of those involved in research, manufacturing, and distribution of product.

**Objective:**

The objective of this indicator is to ensure that, consistently over time, the NRA operates independently of researchers, producers, distributors and other regulated parties.
In order to discharge its duties fairly, the NRA must be independent of those regulated entities. Thus, the NRA may not be engaged in the activities that it regulates and may not be at a hierarchal level that is subordinate to those institutions that perform regulated activities.
In some countries, the NRA historically has been responsible for manufacturing vaccines, which placed the NRA in the position of being judge and party to the matters before it, and thus compromising its independence and impartiality. Independence of the NRA decision-making process from influence by institutions, societies, and industries which may have direct or indirect interest in the NRA decisions is one of the key elements regarding the safe use of medical products and protection of public health.

**Requirement:** Independence of NRA

**Evidence to review:**

The assessor should request for and review:

1. Organizational chart of the national regulatory system;
2. Functioning organizational chart of the NRA;
3. Documents defining mission and functions of the organizations within the national regulatory system.

**References:**

National drug regulatory legislation: guiding principles for small drug regulatory authorities. In: WHO Expert Committee on Specifications for Pharmaceutical Preparations: thirty-fifth report. Geneva: World Health Organization; 1999: Annex 8 (WHO Technical Report Series, No. 885) (1) http://apps.who.int/medicinedocs/documents/s21964en/s21964en.pdf.

Guidelines for national authorities on quality assurance for biological products. In: WHO Expert Committee on Biological Standardization: forty-second report. World Health Organization; 1992: Annex 2 (WHO Technical Report Series, No. 822), (2), http://www.who.int/biologicals/publications/trs/areas/biological_products/WHO_TRS_822_A2.pdf.

Regulation and licensing of biological products in countries with newly developing regulatory authorities. In: WHO Expert Committee on Biological Standardization: forty-fifth report. Geneva: World Health Organization; 1995: Annex 1 (WHO Technical Report Series, No. 858), (3), http://www.who.int/bloodproducts/publications/WHO_TRS_858_A1.pdf.

How to develop and implement a national drug policy, Second edition. WHO, 2001., (116), http://apps.who.int/medicinedocs/pdf/s2283e/s2283e.pdf.

**Framework:** Structure/Foundation/Input

**Rating Scale:**

- NOT IMPLEMENTED (NI): There is no evidence that the NRA is independent from researchers, manufacturers, distributors and wholesalers, as well as from the procurement system.
- ONGOING IMPLEMENTATION (OI): There is no evidence that the NRA is independent from researchers, manufacturers, distributors and wholesalers, as well as from the procurement system; however, demonstrable steps toward this have been taken.
- PARTIALLY IMPLEMENTED (PI): There is evidence that some steps have been taken to establish the independence of NRA from researchers, manufacturers, distributors and wholesalers, as well as the procurement system, but it is not yet implemented.
- IMPLEMENTED (I): There is documented evidence the NRA is independent from researchers, manufacturers, distributors and wholesalers, as well as from the procurement system.

**Limitations and remarks:**

- In case the manufacturer is part of the structure of the National Regulatory System, this must be taken into consideration when evaluating the independency.
- It is important to maintain good collaboration and communication between industry and academia while maintaining the independence of the regulatory system. Regulatory authorities (including national control laboratories) may be involved in scientific research activities. However, these research activities should not entail any conflict of interest with respect to regulatory oversight. Internal researchers with no conflicts of interest are not meant to be addressed by this sub-indicator and scoring the sub-indicator as "not implemented" should be excluded (unless justified for some other reason). On the other hand, if the regulatory authority is involved in research activities which conflict with the mandate to regulate medical products, the sub-indicator should be scored as “not implemented”.
- Scoring this sub-indicator as "not applicable” (NA) is excluded (i.e., this sub-indicator will always apply for all benchmarked NRAs).

These categories provide options to assess regulatory systems transversely (that is, cross-cutting themes) across some or all regulatory functions – for example, legal provisions and resources.

Fact sheets were developed to guide assessors in evaluating compliance with indicators and sub-indicators. Read on for an example related to the overarching regulatory system.

The GBT is supported by a computerized platform known as the computerized GBT (cGBT). The cGBT facilitates the benchmarking process (including the calculation of maturity levels) and helps manage the information collected. It is the tool used in the actual benchmarking and self-benchmarking process.

For more information on the cGBT, please refer to Section 11: Information management systems.

## 5.3 Scoring and the algorithm used to determine maturity level

Scoring the findings of the assessment and using the algorithm to determine the maturity level are two important and interlinked benchmarking concepts. Scoring refers to assessing the level of implementation for each sub-indicator. The algorithm refers to the tool used to consider the cumulative implementation of sub-indicators, in order to determine the maturity level of each regulatory function and the overall maturity of the regulatory system.[4]

As part of the benchmarking exercise, assessors (including self-assessors) are requested to score each sub-indicator. The options for scoring sub-indicators are described as follows. Detailed guidance on the scoring of each sub-indicator is provided in the respective fact sheet.

1. **Not implemented (NI):** no evidence provided to demonstrate any degree of implementation of the sub-indicator. One or more IDP activities related to the sub-indicator should be reflected in the GBT. "NI" is scored as 0 out of 1 (that is 0% as a percentage).
2. **Ongoing implementation (OI):** some actions/steps/activities have been taken towards implementation of the concerned sub-indicator; however, the sub-indicator has not yet been implemented in full. "OI" may also entail implementation of some, but not all, components of the concerned sub-indicator. Subsequently, one or more IDP activities of the relevant sub-indicator should be reflected in the GBT to contribute to the full implementation of the sub-indicator. For mathematical scoring, "OI" is scored as 0.25 out of 1 (that is 25% as a percentage).

4 Depending on the objective and context of the benchmarking-related activity (with the exception of formal benchmarking), it is at the discretion of the WHO Responsible Officer to communicate or not communicate the overall maturity level of the regulatory system to the benchmarked entity (or entities). For example, for capacity-building and RSS purposes, the WHO Responsible Officer may not wish to communicate the overall maturity level as part of a self-benchmarking or assisted self-benchmarking exercise to avoid any potential discouragement, particularly in the case of less mature systems. On the other hand, also for the purpose of RRS, the WHO Responsible Officer may wish to communicate the overall maturity level, as well as detailed scores and maturity levels of different regulatory functions, to channel a message about prioritization and a stepwise approach to strengthening and support for specific regulatory functions, themes or activities. In all cases associated with formal benchmarking, the overall maturity level should be clearly communicated to the relevant entities once the activity is concluded.

3. **Partially implemented (PI):** some actions/activities show full implementation of the sub-indicator; however, such implementation is recent, with little cumulative data for consistent implementation. Supporting documented evidence is expected to be provided to show the recent full implementation of the concerned sub-indicator. Subsequently, one or more IDP activities of the relevant sub-indicator should be reflected in the GBT to ensure consistent implementation and to address any areas for improvement. For mathematical scoring, "PI" is scored as 0.75 out of 1 (that is 75% as a percentage).

1. **Fully implemented (I):** some actions/activities demonstrate the consistent and full implementation of the sub-indicator over a period of time. Supporting evidence is expected to be provided, demonstrating the full, consistent implementation of the sub-indicator (that is, demonstrated over a period time and/or through repetition of the process and outcome). One or more IDP activities of the sub-indicator may or may not be reflected in the GBT to address any identified areas for improvement. "I" is scored as 1 out of 1 (that is 100% as a percentage).

2. **No data available (not available):** no data provided regarding the level of implementation of the sub-indicator. "Not available" is a temporary option that should only exist prior to the self-benchmarking exercise – that is, when the empty tool is provided to the NRA and no data are yet available. Once the self-benchmarking exercise has concluded, "not available" should not be recorded against any sub-indicator. "Not available" is scored as 0 out of 1 (that is 0% as a percentage).

3. **Not applicable (NA):** the sub-indicator does not apply to the regulatory system in question. The non-applicability of any sub-indicator should be supported with a justification explaining how the sub-indicator's exclusion does not pose any adverse or unwanted effects on the relevant regulatory function. Scoring as "NA" could be an option for some (but never all) sub-indicators under a specific regulatory function. In general, "NA" is not an option for scoring the sub-indicator unless otherwise indicated in its fact sheet (in the limitations section). For the purpose of scoring, "NA" eliminates the sub-indicator – in other words, each time "NA" is scored for a sub-indicator under a defined function, the total number of sub-indicators required to be met is reduced by one (hence, the denominator is reduced by one).

As noted, the algorithm is used to determine the maturity level of each regulatory function, based on the cumulative scoring of the sub-indicators under that function. Table 1, along with the following explanatory notes and examples, illustrates how the maturity level algorithm operates.

Each sub-indicator under each regulatory function is linked to a particular maturity level (that is, ML1, ML2, ML3 or ML4), as indicated in the corresponding fact sheet in the GBT. For a regulatory function to reach a certain maturity level, a specified percentage of sub-indicators must be scored as "fully implemented", while others may be scored according to Table 1.

**Table 1 Algorithm for measuring maturity level of individual regulatory functions**

| ML | Percentage of implementation of sub-indicators attained | | | |
|---|---|---|---|---|
| | % of implemented sub-indicators | % of ongoing implementation sub-indicators | % of partially implemented sub-indicators | % of non-implemented sub-indicators |
| 1 | Up to 100% of ML1 | Up to 100% of ML1 | | Up to 100% of ML1 |
| 2 | 95% of ML1+ML2 | 5%5 of ML1+ML2 | | 0% |
| 3 | 100% of ML1+ML2 and 90% of ML3 | 10%[5] of ML3 | | 0% |
| 4 | 100% of ML1+ ML2+ML3 and 80% of ML4 | 20%[5] of ML4 | | 0% |

## Explanatory notes

1. Maturity levels are built on each other. Therefore, reaching a certain level (ML2 to ML4) for a function is not possible unless the lower maturity levels for that function have been met – in other words, unless all sub-indicators linked to the lower maturity levels have been fully implemented. By definition, a regulatory function cannot be scored less than ML1.
2. The overall maturity of the regulatory system is a function of the maturity of individual functions, subject to the benchmarking process. More specifically, the overall maturity is equal to the lowest maturity level of any function, subject to benchmarking.
3. According to the flexible algorithm, an overall level of ML3 can be achieved if 100% of ML1 and ML2, and 90% of ML3, sub-indicators have been met, and a roadmap has been developed to implement the remaining 10% of ML3 sub-indicators within one year.

## Examples: how the algorithm determines the maturity level of regulatory functions

**Example 1:** The number of sub-indicators linked to ML1 and ML2 under the "registration and marketing authorization" function is six and two sub-indicators respectively (that is, eight sub-indicators in total). Thus, 5% is equal to 0.4 sub-indicators – this is rounded up to one sub-indicator. If a regulatory system is found to have one sub-indicator linked to ML1 or ML2 under the "registration and marketing authorization" function that is scored as "not implemented", the maturity level for this function will be ML1, as 0% of ML1 and ML2 sub-indicators should be scored as "not implemented".

On the other hand, if the regulatory system is found to have one sub-indicator linked to ML1 or ML2 that is scored as "ongoing implementation", the maturity level of the "registration and marketing authorization" function will be ML2 (that is, if all other sub-indicators linked to ML1 and ML2 are scored as "implemented"). This is because the

5 If the percentage is less than or equal to one sub-indicator for a particular function, it should be rounded up to one sub-indicator for that function, provided the total percentage across all functions does not exceed the one stated one, as explained in the following examples.

algorithm allows 5% of ML1 and ML2 sub-indicators to be scored as "partial" or "ongoing implementation". However, this is also conditional on a second requirement – namely, that the number of sub-indicators linked to ML1 and ML2 that are scored as "partial implementation" or "ongoing implementation" across all regulatory functions is less than 5% of the total number.

**Example 2:** The number of sub-indicators linked to ML1, ML2, ML3 and ML4 under the national regulatory system function are four, seven, 27 and 22 sub-indicators respectively. As with the previous example, if a regulatory system is found to have one regulatory system sub-indicator linked to ML1 or ML2 that is scored as "not implemented", the maturity level for the regulatory system will be ML1. On the other hand, if the regulatory system is found to have one sub-indicator linked to ML1 or ML2 that is scored as "ongoing implementation", the maturity level assigned to the regulatory system will be ML2. Furthermore, if the regulatory system is found to have two sub-indicators linked to ML3 that are scored as "ongoing implementation" or "partial implementation", the maturity of the regulatory system will be ML3, as 10% of ML3 sub-indicators is equal to 2.2 sub-indicators (which is rounded to two sub-indicators).

Users are not required to perform the calculations, as the algorithm is built into the software of the cGBT. Consequently, the maturity level assigned for the benchmarked functions is automatically calculated and displayed to the user following the scoring of the relevant functions.

## 5.4 Maintenance and revision

The GBT is revised on a periodic basis to:

(i) reflect experience in use;
(ii) consider feedback from users;
(iii) ensure continuous monitoring and improvement of the tool's capability to benchmark regulatory legality, independence, impartiality, proportionality, clarity, flexibility, responsiveness, consistency, effectiveness, efficiency and transparency; and
(iv) align with updated WHO guidelines and advancements in the regulatory sciences field.

To ensure the GBT remains fit for purpose, several approaches may be considered, including formal and informal consultations with national and regional regulatory experts, related technical agencies and other partners, as well as public consultations.

The GBT must comply with:

- current WHO guidelines for assuring the quality, safety and efficacy of medical products, as endorsed by the WHO Expert Committee on Specifications for Pharmaceutical Preparations and the WHO Expert Committee on Biological Standardization;
- WHO prequalification requirements; and
- any relevant international standards or guidelines consistent with WHO policy for strengthening regulatory system capacity (for example, ISO standards, the International Council for Harmonisation and the Pharmaceutical Inspection Co-operation Scheme guidelines).

For the purpose of change control and management, the WHO GBT is subject to strict rules for nomenclature, as detailed below.

- The GBT name reflects a two-tier control system that consists of revision ("rev.") and version ("ver.") designations, for example, GBT rev. VI, ver. 1.

- The revision number, expressed in Roman numerals (beginning with I), denotes the control of the GBT functions, indicators and sub-indicators. Any change to these GBT components results in a change to the GBT revision number.
- The version number, expressed in Arabic numbers (beginning with 1), denotes the control of the GBT fact sheets in the absence of changes to the aforementioned components (that is, functions, indicators and sub-indicators). Any change to the GBT fact sheets results in a change to the GBT version number.
- Whenever a new revision is introduced, the version number is reset to one (1).

Only the latest revision and version of the GBT will be available on the WHO website in PDF format. No other software format (for example, Word or Excel) is considered valid.

To ensure accessibility, WHO is constantly translating and publishing the GBT in several languages (mainly United Nations languages). For example, the GBT is currently available in English, French and Spanish (see the GBT page on the WHO website: https://www.who.int/tools/global-benchmarking-tools).

Furthermore, manuals and relevant standard operating procedures are regularly revised to reflect updates and changes to the GBT, and to ensure continuous monitoring and improvement of benchmarking processes.

# 6 Overview of the benchmarking process

This manual provides high-level guidance on the GBT and the overall benchmarking process. The manual is complemented by a set of standard operating procedures, manuals and other references, as listed in Annex 1.

For the purpose of this manual, the term "benchmarking" represents the end-to-end benchmarking process, comprised of all or some of the following activities.

1. Planning and scheduling
2. Introductory visit
3. Self-benchmarking
4. Verification of self-benchmarking
5. Pre-benchmarking visit
6. Formal benchmarking
7. Enhanced performance assessment[6] of specific regulatory functions, for example:
   - observed audit for evaluation of Good Manufacturing Practice (GMP) regulatory inspection function
   - field visit for assessment of vigilance function
8. IDP
9. Follow-up and monitoring
10. Re-benchmarking

The following points are essential for a proper understanding of the benchmarking process.

- The overall benchmarking process can be considered an ongoing, long-term process that requires full commitment and cooperation from the parties involved, including WHO and the institutions forming and contributing to the regulatory system (for example, NRAs, national control laboratories, research ethics committees, institutional review boards, pharmacovigilance centres and the national immunization programme). Political will and the provision of adequate resources are also key for successful benchmarking processes.
- The benchmarking process may not necessarily cover all activities mentioned in the GBT. This will depend on the status of the regulatory system being benchmarked and mutual agreements reached among WHO, the country and other relevant partners.
- The sequence of steps may not follow the exact order listed above; for example, the timing of any enhanced performance assessments may vary.
- All benchmarking activities could be conducted onsite, virtually or via a hybrid model (that is, part virtual and part onsite). Further details are provided in Annex 6: Guidance on virtual benchmarking.
- Customized benchmarking activities, as described in Section 6.10, may also be conducted as part of the overall benchmarking process. This includes a "rapid" (or abridged) benchmarking exercise for the purpose of providing a preliminary and partial understanding of the maturity of the regulatory system. Such customized activities could also include the assessment of specific aspects of the regulatory system – notably those functions undertaken at the state or provincial level. These would be conducted using a customized GBT developed for this purpose.

6 Assessment of regulatory performance is expanded under the WLA framework.

- The IDP is a dynamic plan that is updated and implemented in parallel with the benchmarking of the regulatory system.

Fig. 5 is a high-level visual representation of the different steps of the WHO benchmarking process, including WHO pre-visit, self-benchmarking, verification of self-benchmarking, formal benchmarking, and finally monitoring of progress made. Fig. 6 provides a detailed flowchart of the same process.

**Figure 5 High-level overview of the key activities of the benchmarking process**

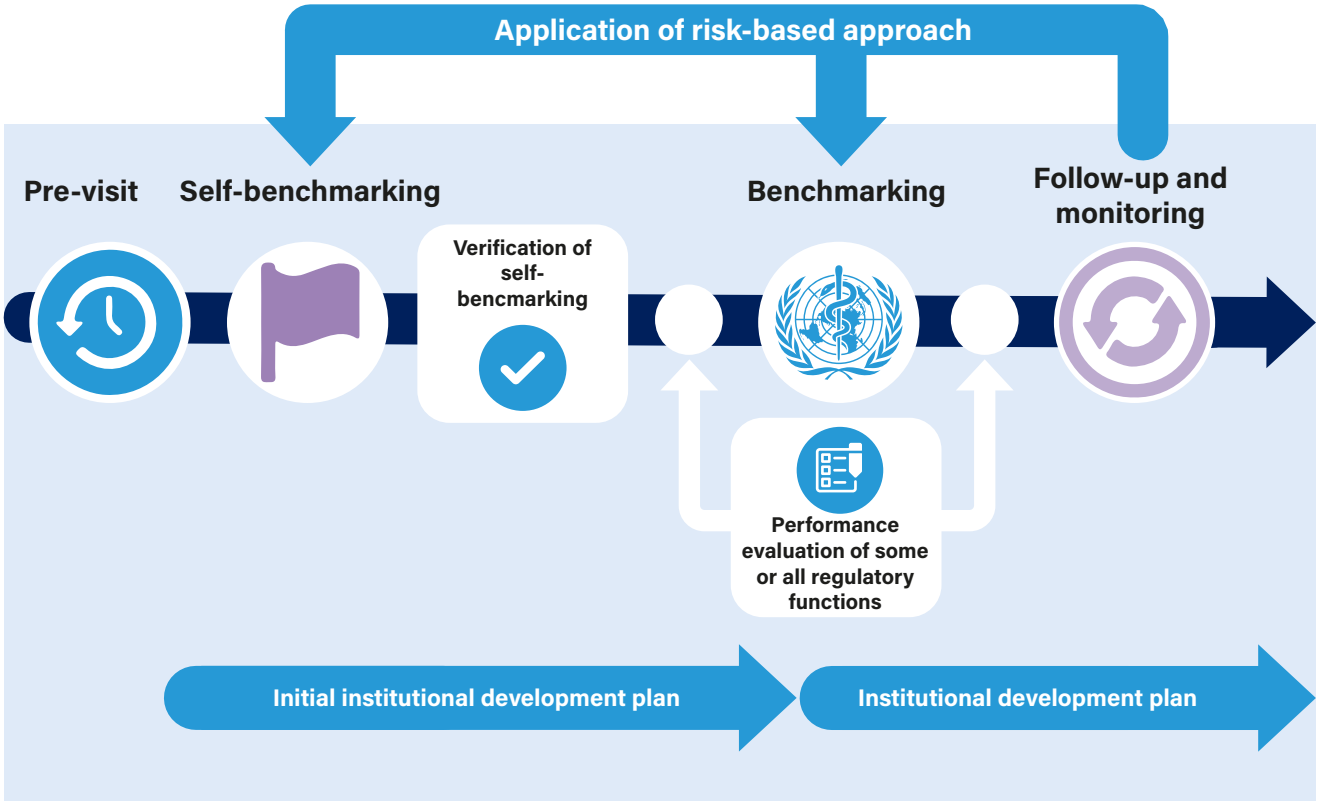
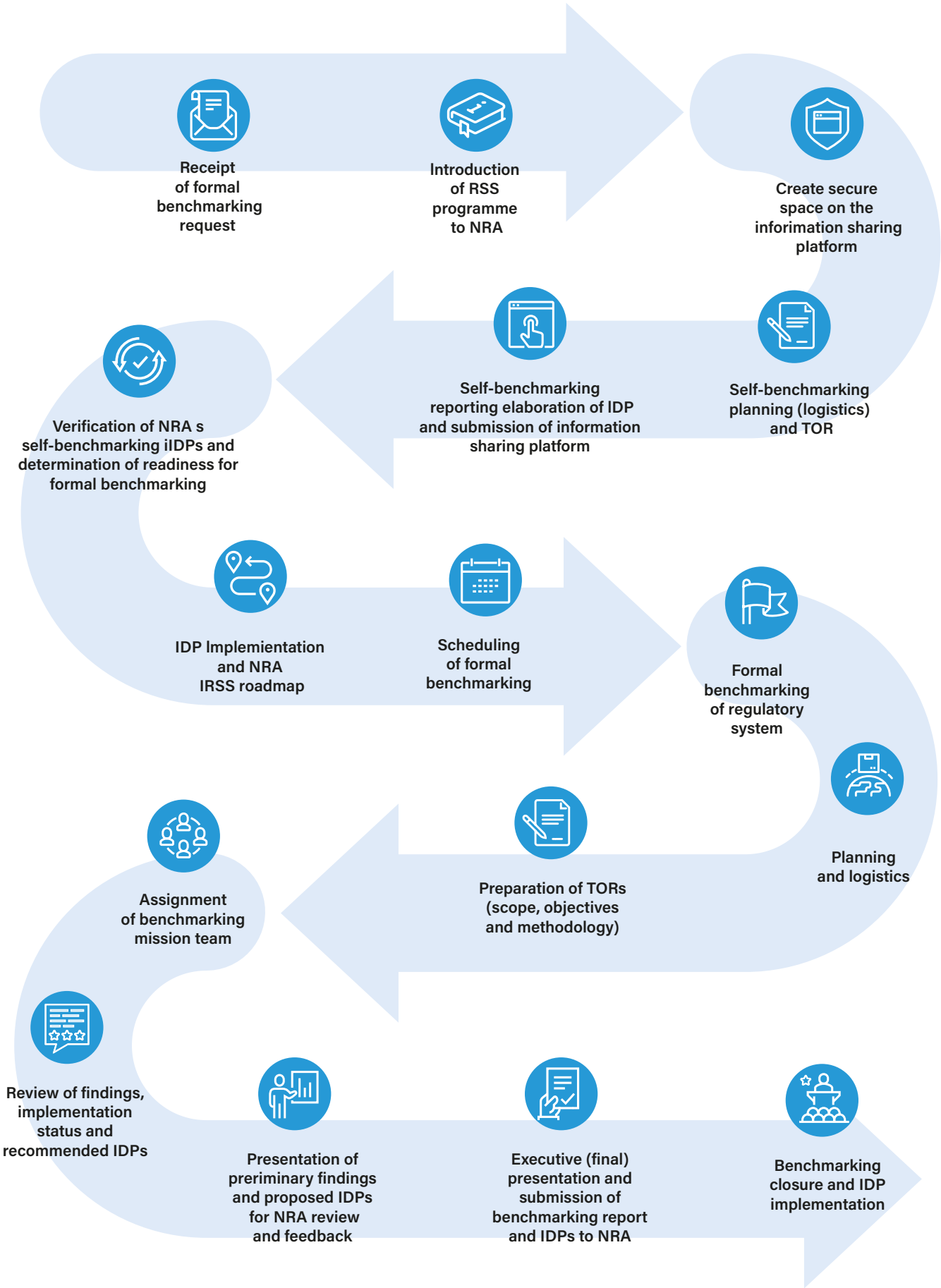


**Figure 6** **Flowchart of benchmarking process**



## 6.1 Planning and scheduling

The work planning process ensures the involvement of the three levels of WHO (headquarters, regional offices and country offices) on all aspects related to benchmarking activities, based upon agreed work plans.

Work plans should be reviewed at least once a year, in light of a country's requests and in agreement with regional and country offices, as changes may occur in dates, team composition and specific objectives of benchmarking activities (for example, introductory, self-benchmarking, pre-benchmarking and formal benchmarking missions).

For further details on the coordination between headquarters, regional offices and country offices, please refer to Section 7: Roles and responsibilities.

**Terms of reference to be sent to the country:** Terms of reference should be drafted once an activity has been confirmed with the counterparts in the concerned Member State, following the applicable WHO procedures, and as soon as a visit has been scheduled and agreed to with the respective regional and country office. The terms of reference should specify objectives, scope, expected outcome, methodology, venue, proposed dates for the benchmarking activity, a tentative agenda and the composition of the team. The proposed terms of reference should be shared with the concerned NRA through the official communication channels for agreement and concurrence.

**Selection of WHO staff and external assessors:** Benchmarking activities are conducted by a team of qualified subject matter experts. Except for formal benchmarking missions, the team may be composed of WHO staff, WHO consultants, external experts or a combination of these people. Formal benchmarking, on the other hand, is always conducted by a team composed of WHO staff and external assessors. In all cases, activities are conducted under the direction of WHO.

External assessors should be selected from the database of qualified subject matter experts (https://extranet.who.int/gbtassessors/assessors) or from other sources, as required. They are chosen based on the specific areas of expertise required for the activity. External experts are regulatory experts from NRAs that are not the subject of the benchmarking activity (hence, they are free from any potential bias). The selected assessors, as part of their qualification, should complete any essential training on the GBT and cGBT. Other considerations in selecting benchmarking team members include avoidance of language barriers and ability to handle more than one function (to maintain a team of appropriate size).

It is strongly advised that each team include senior assessors with prior experience of the regulatory system benchmarking process, who can serve as mentors to new assessors or observers. Further details on the criteria for qualification and competence of assessors can be found in Section 8 and in the respective procedure for the establishment and maintenance of a roster of qualified GBT assessors.

Before a regulatory system benchmarking, a list of team members of non-WHO assessors, is conveyed to the NRA for information, comment and government clearance. Subject to proper justification, the NRA has the right to request a replacement for any team member who is not WHO staff. Once the team composition is endorsed by the NRA, invitation letters are sent to the home institutions of the selected team members to obtain clearance, if required.

For all benchmarking activities, team size and composition should reflect the purpose and scope of the visit, as well as the size and complexity of the regulatory system and targeted regulatory functions to be assessed.

## 6.2 Introductory visit

The introductory visit serves to explain the WHO RSS programme and to ensure the NRA understands the objectives, policies, terms and methodology of the programme, as well as the overall benchmarking process. During this visit, WHO can also confirm the political will to proceed with the benchmarking process.

Specifically, the primary goals of the introductory meeting are to:

- help the NRA understand the type of information required and identify documents for translation (if any);
- confirm the commitment and cooperation among the parties involved in the benchmarking process;
- develop a roadmap for the benchmarking, including planning the steps that lead up to the formal benchmarking (for example, self-benchmarking, observed audits and vigilance system field visits);
- clarify the obligations of the various parties;
- respond to questions and clear up any misunderstandings;
- ensure a more effective and efficient benchmarking process, especially when coupled with the aforementioned screening activity. The benchmarking manual should be provided to the NRA at this time, together with an explanation of how and where to access all relevant documents for benchmarking; and
- map the regulatory system in the country. The mapping process involves discussions about who is responsible for different regulatory functions in the country and – if more than one entity is involved – how they collaborate and coordinate with one another. The mapping process also helps to understand how the regulator is interacting with different stakeholders.

When necessary, other relevant concepts, principles and updates may be addressed during the introductory visit (for example, WLA, Good Regulatory Practices and the roadmap for prequalification of vaccines), based on prior discussions and agreements with the NRA. Such details should be reflected in the relevant terms of reference.

The introductory visit could be conducted in conjunction with an assisted self-benchmarking workshop for a country or number of countries.

When the introductory visit is not performed, the WHO Responsible Officer must ensure that all relevant explanations and clarifications are provided to the NRA prior to any planned WHO visits (including self-benchmarking, observed audit, benchmarking and follow-up visits).

## 6.3 Self-benchmarking

The regulatory authority and affiliated entities should perform self-benchmarking using the current version of the GBT to ensure the quality and efficiency of the formal benchmarking process.

Assigned staff for each affected department or unit within the regulatory system should:

- self-score each GBT sub-indicator;
- provide input to justify the scoring;
- provide links to publicly available evidence or upload relevant documented evidence to the WHO NRA information-sharing platform (see Section 11 for more details); and
- propose input to the initial IDP, as necessary.[7]

WHO may assist the regulatory authority in this process by organizing an assisted self-benchmarking workshop. This workshop serves to explain the GBT, the importance of accurate assessment and the expected outcomes of the exercise. The workshop is also an opportunity for WHO to respond to questions and address potential misunderstandings about the information sought in the GBT.

One expected outcome of self-benchmarking is to discuss and reach agreement on sub-indicators that can justifiably be scored by the NRA as "not applicable" (see Section 5.3). This determination is critical, considering the impact of each sub-indicator's score on the maturity level of respective functions, and on the overall maturity level assigned to the regulatory system. Moreover, a mutual understanding and agreement between the NRA and WHO on these sub-indicators is essential to avoid time-consuming debates during subsequent activities. However, NRA staff and WHO experts should be mindful that discussions on non-applicable sub-indicators during self-benchmarking are preliminary. Further confirmation and agreement on the applicability of these sub-indicators is expected during the subsequent step: verification of self-benchmarking.

The self-benchmarking results – including the draft initial IDP, produced by the NRA and affiliated institutions – will be used as a basis for formal benchmarking. Once verified by WHO, the draft initial IDP will be provided to the assessors prior to benchmarking (as explained in the next step). The scoring justification and supporting evidence from the self-benchmarking exercise should be provided to WHO in the form of a completed GBT, with supporting evidence uploaded to the WHO information-sharing platform by an agreed date.

For further guidance on the self-benchmarking workshop, refer to the self-benchmarking manual, including generic terms of reference.

## 6.4 Verification of self-benchmarking

The verification step is meant to assess the completeness and quality of self-benchmarking results. WHO (or a designated expert on behalf of WHO) reviews and verifies the information generated from the self-benchmarking exercise to confirm that:

i) all relevant regulatory functions and sub-indicators have been addressed;
ii) scoring appears to be justified on the basis of information provided; and
iii) the information provided is relevant, adequate and supported by documented evidence when necessary.

As highlighted in the previous section, further discussion and agreement on non-applicable indicators should take place during verification of the self-benchmarking

7 The NRA updates information prepopulated by WHO based on the desk-based screening.

results. To this end, WHO may seek further clarification and justifications from the NRA.[8] Discussions on non-applicable sub-indicators are not expected to be repeated during formal benchmarking, unless relevant new evidence emerges. If this happens, the benchmarking WHO Team Leader should be notified by the assessor, and the issue brought to the attention of the WHO formal benchmarking team for an appropriate decision – that is, to maintain or change the original scoring of the respective sub-indicator.

The NRA should be given a clear timeline to amend its scoring and inputs to the GBT and upload the completed tool, along with supporting evidence and documents, to the WHO information-sharing platform. WHO, or an expert on behalf of WHO, should verify the submitted information no later than one month from the date the amended self-benchmarking report was submitted (or uploaded).

Following the verification of self-benchmarking results and supporting evidence, an amended and completed self-benchmarking report should be uploaded by the NRA to the WHO NRA information-sharing platform. This report should include all details related to self-benchmarking, including background, activities performed (such as the self-benchmarking workshop), preliminary outputs, outcome verifications, proposed initial IDP and the path forward (that is, next steps and timelines).

## 6.5 Pre-benchmarking visit

When necessary, the WHO Responsible Officer (or delegate) may perform a pre-benchmarking visit within an appropriate timeframe to confirm the readiness of the NRA for formal benchmarking. During this visit, detailed discussions should be held and agreements reached on the agenda and activities planned for formal benchmarking. A final check should be performed with respect to documents that require translation, documented evidence that requires uploading to the information-sharing platform, and any other steps required to prepare for formal benchmarking. The WHO team may also review regulatory functions, including NRA input, self-score, documented evidence and draft IDP, to highlight potential issues that may prevent the regulatory system reaching certain targeted outcomes. It should be noted that pre-benchmarking does not by any means constitute a formal evaluation of the regulatory system. As such, the findings of the formal benchmarking may be different, in part or in full, to the pre-benchmarking.

In addition, the NRA may be asked to complete the GBT Quantitative Indicators (GBTQI) and share it with WHO at least 14 calendar days before the formal benchmarking. For this purpose, the WHO officer should provide the NRA with the latest version of the GBTQI template. The WHO officer is responsible for providing clarifications on the content and completion of the GBTQI (see Annex 5).

The WHO officer should also convey the following facts to the NRA:

- Filling out the GBTQI template is optional and does not represent an essential part of the GBT.
- Although optional, the GBTQI contributes to the quality of the formal benchmarking process and outcomes.
- The GBTQI are not subject to scoring; hence, they do not affect the maturity level assigned to a regulatory system.

In all cases, the NRA should provide WHO with the completed cGBT, along with the relevant documented evidence (for example, through the information-sharing platform), at

8 Keeping in mind the limited number of sub-indicators that can justifiably be scored as “not applicable”, according to limitations and remarks in the GBT.

least 14 calendar days prior to the formal benchmarking visit. The GBTQI, if completed, should also be provided. A minimum of 14 days is needed so that the benchmarking team has sufficient time to prepare for the formal benchmarking visit.

## 6.6 Formal benchmarking

While this section applies mainly to formal benchmarking activities, the guidance may also be helpful for other benchmarking activities (for example, assisted self-benchmarking, pre-benchmarking, etc.).

**Description of the process**

The formal benchmarking is meant to provide an objective assessment of the enabling regulatory system and regulatory functions under review, based on agreements reached at the start of the overall benchmarking process. As noted elsewhere, the final list of assessors is confirmed following review and endorsement by the NRA.

Most commonly, the formal benchmarking is requested by the country for one of two reasons: 1) to provide a detailed picture of the regulatory system's maturity, strengths and areas for improvement, thereby serving as a roadmap for RSS; and 2) to lead to official WHO recognition in the context of achieving ML3 or public designation as a WLA.

Pre-benchmarking steps and activities undertaken with the NRA in the lead-up to formal benchmarking serve to ensure, to the extent possible, that the authority and affiliated institutions are prepared for formal benchmarking. It is important that senior NRA officials are aware from the outset that the outcomes of formal benchmarking can differ from the outcomes of the self-benchmarking exercise.

**Terms of reference**

Once the objectives, dates and other details of the formal benchmarking have been agreed, the Responsible Officer or designated Team Leader should arrange for the terms of reference for the formal benchmarking to be drafted, as per the relevant template (see Annex 2).

The terms of reference should include the following:

- background and rationale for the formal benchmarking mission;
- scope, objectives, expected outcomes and deliverables for the mission;
- methodology, venue, dates, locations and institutions to be visited;
- WHO benchmarking team members and lead (see Section 7: Roles and responsibilities);
- assignment of assessors to the different regulatory functions (that is, benchmarking streams), along with tentative benchmarking schedule; and
- documents required in sufficient time before benchmarking, including those available through WHO's secure information-sharing platform.

The terms of reference may also include details related to complementary activities required to assess the regulatory system's level of performance (for example, an observed audit of regulatory inspection or vigilance field visit), which may precede the formal benchmarking.

The terms of reference to be used for the formal benchmarking should be available and distributed to all participants – including relevant NRA staff, the WHO benchmarking

team, and responsible staff at the WHO regional and country offices – 60 calendar days before the visit. As previously noted, the terms of reference should be shared with the concerned NRA through official communication channels for agreement and concurrence.

The list of assessors and observers should be shared with the NRA at least 30 working days prior to the benchmarking visit. Should the country have concerns about any of the non-WHO assessors due to a perceived conflict of interest, this should be communicated to WHO at least 20 working days before the formal benchmarking. WHO will decide whether to consider such concerns on a case-by-case basis in consultation with the NRA.

**Briefing the benchmarking team**

The WHO benchmarking team must be thoroughly briefed on the principles described in this manual prior to the start of the formal benchmarking visit. The Team Leader will brief all team members virtually (for example, by videoconference, teleconference or email) with respect to:

- the methodology of the benchmarking;
- the availability of required documents;
- the use of the cGBT;
- the roles and responsibilities of different team members, including the specific area(s) of the benchmarking process to which they have been assigned; and
- the logistical arrangements.

When necessary, this briefing should be repeated two or three times to ensure all team members are covered. Any concerns or issues raised by WHO benchmarking assessors should be discussed at this time.

No matter how experienced, each team member should take the necessary time to prepare for the benchmarking, including reading background documents and familiarizing themself with the latest version of the GBT and cGBT. Team members should also conduct a desk review of the completed cGBT, along with the relevant documented evidence (for example, through the information-sharing platform), prior to benchmarking, to ensure proper use of time during formal benchmarking.

**Onsite preparatory meeting**

The Team Leader should organize a short meeting the day before the official meetings start, or upon arrival of all benchmarking team members. At this meeting, the Team Leader will review the programme and update team members on the latest information, benchmarking agenda and schedules. Team members should arrive in the country (at the latest) by early afternoon the day before the formal benchmarking starts.

**Opening meeting with NRA**

The opening meeting should be held on the morning of the first day of the visit. The WHO benchmarking team must present and explain the objectives and expected outcomes, as well as the methodology and tools that will be used to conduct the benchmarking. This meeting must be attended by key decision-makers and/or top managers representing the relevant institutions involved in the national regulatory system. This includes NRA staff, national control laboratory staff, staff from allied institutions (for example, representatives from the national immunization programme in charge of adverse events following immunization and top management of the national vigilance centre), and country office staff, including the WHO Representative or delegate.[9]

9 Whenever possible, the WHO Representative should participate in the opening and closing sessions of a benchmarking mission, as well as a subsequent debrief.

WHO's presentation at this meeting should use the following slides: 1) title of the visit; 2) outline of presentation; 3) objectives of the benchmarking; 4) expected outcomes; 5) WHO benchmarking team; 6) proposed programme; 7) list of institutions to be visited; and 8) methodology of work.

The meeting should begin with the NRA and ministry of health delivering opening remarks and introducing officials. The Team Leader should introduce team members and their responsibilities, and then present, for discussion and agreement, the objectives and agenda for the visit. Appointments with key staff should be confirmed and the list of documents to be provided to team members during the benchmarking should be reviewed. The NRA is typically invited to present an overview of the regulatory system at this meeting.

**Points related to the actual benchmarking process**

a) The team should be split into benchmarking streams, which should be assigned to one or more regulatory functions based on expertise (as reflected in the final terms of reference for the formal benchmarking visit). This provides for a more focused and efficient process (see also Section 7.6.1 on the roles and responsibilities of the Team Leader).

b) Supplementary documents (in addition to the documented evidence available on the information-sharing platform and through links included in the cGBT) may be requested during the benchmarking visit. This is because each indicator and sub-indicator score must be supported by documentation. Before placing such requests, the assessor should collect all official documents or working papers that can be used as evidence. These documents are usually provided to the team through the WHO information-sharing platform prior to formal benchmarking, on the first day of the visit, or when conducting interviews. However, some documents may be provided late, incomplete or not yet translated. In such cases, the team should conduct interviews with the relevant NRA staff to clarify details of the documents.

c) In some cases, the team may need assistance from an external translator. Usually, the Team Leader is responsible for arranging this with the relevant WHO officials before the visit. The NRA may also arrange for translation (typically through the international regulatory affairs unit).

d) WHO benchmarking team members are expected to record their input and scores for each indicator and sub-indicator in a clear and transparent manner following the necessary discussions. Assessors must also ensure that for all sub-indicators not fully implemented, recommendations to address gaps are included in the proposed IDP.

e) Benchmarking assessors' scores and recommendations are based on reviews of NRA inputs and documented evidence, and further clarifications provided by relevant NRA staff.

f) The score attributed to each indicator should be suggested by the relevant team members and, when necessary, discussed among the WHO benchmarking team in the daily wrap-up session to obtain consensus – particularly in the case of dissenting opinions. Once agreement has been reached, the WHO benchmarking team should explain the findings to the institution being benchmarked. It is important that the team of assessors explain the score and obtain feedback before the final report is submitted. The WHO benchmarking team should keep in mind that scoring should be openly discussed with the NRA staff being interviewed, and that, as much as possible, a consensus should be reached (see below). This means that scores should be decided among the WHO benchmarking team, and then finalized with NRA staff – with possible adjustment of scores and recommendations, based on suggestions from NRA staff.

g) Dissenting opinions

- Dissenting opinions within the WHO team: If dissenting opinions arise among assessors during the scoring process, they should be addressed and resolved within the team, so that there is one consistent message from WHO.
- Dissenting opinions between WHO and the NRA: Some sub-indicators may not be sensitive enough to provide an accurate benchmarking finding and score, and could therefore easily be challenged by the NRA. In these and other situations where the score is challenged, it is important to explain the scoring process, to receive and discuss feedback on the challenged indicators, and to obtain a consensus on the score obtained. If this is not possible, the WHO team should explain to the NRA why the score cannot be amended to reflect its views or concerns.

h) A daily wrap-up session among the WHO benchmarking team should be held to update each team member on the progress made, to discuss any issues raised, and, if necessary, to adjust the benchmarking agenda.

i) A closed wrap-up session among all members of the WHO benchmarking team should be conducted one day before the end of the formal benchmarking visit. The purpose of this session is to share information and documents collected by the different team members and to agree on the benchmarking draft report, including proposed scoring and IDP recommendations. Consensus should be sought among team members; however, in the case of disagreement, the final decision is up to the WHO Team Leader.

The closed wrap-up session also serves to ensure that strengths and gaps, as well as recommendations (that is, proposed IDP activities) for related indicators, are clear and consistent across regulatory functions, and that the designated assessors are adequately prepared for the presentation of findings and recommendations to the NRA.

**Technical debriefing**

Findings and recommendations made by the WHO team should always be shared and discussed with senior NRA officials before being presented to a larger audience. This helps avoid surprises or delicate situations that could offend the NRA. A technical debriefing should be organized a day before the closeout meeting to provide detailed feedback on observations and identified gaps. The technical debriefing should be used as a further opportunity for the NRA to provide additional information and resolve any misunderstandings between the NRA and the WHO benchmarking team.

**Closeout meeting**

A closeout meeting should be organized for the last day of the formal benchmarking visit. Ideally, the closeout meeting should be attended by the same participants as the opening meeting (that is, high-ranking officers, key personnel, and top management from the NRA and ministry of health).

The WHO Team Leader should make a presentation covering the benchmarking visit. This should include a recap of objectives, expected outcomes and team members, as well as the overall findings (specifically, maturity level and underlying scoring) and recommendations (specifically, IDP activities) related to the regulatory system and the individual regulatory functions. The presentation should also include a tentative roadmap (that is, next steps with associated timelines) and possible opportunities for the NRA to consider when implementing the IDP. Designated assessors should present findings and recommendations related to their area of review.

The presentation generated by the WHO cGBT from the team's input can be used for this purpose "as is" or after appropriate amendment. The cGBT will automatically assign and display the level of maturity for each regulatory function.

It is essential to highlight and build on the NRA's strengths, in order to encourage further progress and ongoing commitment, and to avoid undermining the NRA's work. Comparisons with other NRAs should be avoided.

The presentation should be distributed to participants at the closeout meeting and uploaded to the relevant WHO-NRA information-sharing platform. With agreement from WHO, the presentation may be amended to reflect comments and corrections from the NRA.

**Preliminary draft benchmarking report**

The preliminary draft benchmarking report should be distributed at the closeout meeting and uploaded to the relevant information-sharing platform. As with the exit presentation, the draft report should be created from the cGBT used during the benchmarking visit. It should include WHO assessors' comments, scores and IDP activities (if any) for each sub-indicator, as well as a tentative roadmap with next steps. Comments from the meeting should be incorporated, as appropriate.

The Team Leader subsequently compiles the different parts of the report written by team members, along with a narrative section, and forwards it to the designated Responsible Officer for review no later than two weeks after the visit. The preliminary draft benchmarking report should be uploaded to the information-sharing platform soon after.

The draft report may be amended according to comments and corrections requested by the NRA or members of the WHO benchmarking team (see below).

**NRA feedback on the preliminary draft benchmarking report**

Upon notification by WHO, the NRA should download the preliminary draft benchmarking report for thorough review and analysis. The NRA should provide any comments to WHO within 20 working days of receipt of the draft report. NRA comments should be supported, as appropriate, with supplementary documented evidence. This evidence should be uploaded to the information-sharing platform. Ideally, the NRA should provide a corrective and preventive action plan. The NRA should notify WHO once all comments have been compiled and supporting evidence has been uploaded to the information-sharing platform.

NRA comments, along with documented evidence, should be downloaded by the WHO RSS team and shared, as necessary, with each WHO assessor – additional facts and evidence may result in a change in benchmarking results. Evidence may include further documentation, explanations or evidence of activities that address one or more of the gaps found during the benchmarking visit. While this may delay issuance of the final report, it should not delay implementation of the IDP – provided the activities were agreed upon during the closeout meeting.

**Final benchmarking report**

Any comments or corrections received from the NRA or WHO benchmarking team are collected for consideration in the final report by the designated Responsible Officer. After all comments from the NRA have been resolved, or if no comments are received, WHO will issue the final report and inform the country that the report is issued as "an endorsed report".

The final benchmarking report should be uploaded to the respective section of the relevant WHO NRA information-sharing platform within 180 calendar days of the benchmarking mission. The NRA should be officially notified (through e-mail or other reliable means) when this occurs.

**WHO master file**

The WHO Team Leader is responsible for collecting all electronic documents related to the benchmarking process, in order to build a WHO master file to be archived on the NRA information-sharing platform. The master file should be ready by the end of the benchmarking visit. Updates to the master file will continue to take place; these may include comments, suggested revisions and evidence submitted by the NRA, as well as the finalized benchmarking report.

Electronic documents may be posted immediately on the information-sharing platform server. See Section 11.2 for further detail.

**Issuance of a WHO official letter**

A WHO official letter indicating the maturity level of the overall system and individual regulatory functions will be issued for a regulatory system that has reached ML3 or ML4, as documented by WHO following formal benchmarking and resolution of all (major) outstanding issues. The letter should be signed by the appropriate WHO official, as per WHO internal procedures. Upon request by the concerned Member State, WHO may issue a letter indicating the maturity level of the overall system and individual regulatory functions, regardless of the maturity level achieved.

Countries may request an official ceremony, which can be organized locally with the WHO Representative presenting the WHO official letter. WHO may also issue an official public statement or press release following review and concurrence by the relevant WHO communications unit.

It should be noted that the public designation of WLAs, if applicable, will be governed by the policy and operational guidance.

## 6.7 Institutional development plan

Prepared by the NRA and WHO team of assessors, the IDP is a work plan listing proposed activities to be undertaken for a regulatory function, normally within a timeframe of two to three years.[10] It represents the key output of the benchmarking process and serves as the basis for improvement and monitoring progress.

The IDP includes proposed activities for each recommendation, together with associated milestones or deadlines and responsible institutions and officers. The IDP also identifies the additional support required to implement recommendations, the approximate amount of funding required, and the potential sources of funding.

As previously noted, a high-level roadmap (that is, next steps with associated timelines) is helpful in guiding implementation of an IDP and subsequent benchmarking activities.

Each assessor is responsible for proposing at least one recommendation for each sub-indicator that was not fully implemented. The proposed IDP must be discussed with the institutions being benchmarked before the team completes its visit. The IDP should be

10 Subject to available resources and ability to execute recommendations, especially when they relate to legislation, structural changes or increases in staffing.

discussed and agreement reached between WHO and the benchmarked regulatory system before finalization and official endorsement of the benchmarking report.

Considering the global demand for RSS, WHO may consider several factors when addressing country requests for implementation of IDP activities. These include, but are not limited to, resources required for implementation versus resources available; impact of implementation at the country, regional and international levels; existing capabilities that can be used; involvement of other partners at country level and beyond; and the NRA's contribution and commitment to the IDP.

The IDP is a living document that should be updated by the NRA as measures are implemented to address recommendations. "Ownership" of the IDP resides with the NRA; this must be understood by the country. Implementation of the IDP is therefore the NRA's responsibility. Successful implementation of the IDP requires a country's full commitment, including assurance of the necessary human and financial resources.

Nevertheless, most countries will require additional support. WHO plays a critical role in this regard, by either providing or trying to secure the necessary technical support – for example, through the Coalition of Interested Parties, centres of excellence or identified subject matter experts. Different mechanisms might be considered to address gaps and build capacity, such as in-country, regional or virtual training; use of consultants; "twinning" between NRAs; study tours; and placement of NRA regulators into advanced NRAs or WHO (for example, the prequalification team, pharmacovigilance team or RSS team).

To the extent possible, efforts should be made to identify possible sources of funding to support IDP implementation beyond the resources available or anticipated at the country level, including support from the donor community. It is also important to confirm resources available within WHO at the country, regional and headquarters level. Ideally, this should be confirmed prior to the benchmarking visit, as part of the joint country support planning process.

## 6.8 Follow-up visit

A "follow-up visit" is a visit to an NRA that occurs at any time during a country's RSS programme, and which is not part of the visits described earlier.

'The overall objective of a follow-up visit is to maintain close contact and coordination with the NRA in relation to the overall RSS programme. Follow-up visits may serve a variety of purposes – for example, supporting the NRA's preparation for formal benchmarking; monitoring the progress made since the last WHO visit (including IDP implementation and updating the IDP for future implementation); and providing additional support to the NRA. The same benchmarking tool and IDP should be used and updated for all follow-up visits to reflect progress, areas for further improvement or new recommendations. Agreement should be reached on other objectives of a follow-up visit on a case-by-case basis.

Follow-up visits may be requested by the NRA or the country or regional office. In some cases, an urgent follow-up visit can be suggested when needed to finalize the benchmarking process (for example, for benchmarking associated with prequalification).

## 6.9 Re-benchmarking

Benchmarking performed in the context of regulatory system recognition – for example, as required for prequalification of vaccine manufacturers or in relation to a WLA designation – requires periodic confirmation of performance and maturity level. The term "recognition" refers to regulatory systems that have achieved at least ML3: a level that represents a stable, well-functioning regulatory system.

"Re-benchmarking" is typically performed every three to seven years using a risk-based approach. It may be conducted onsite or offsite through desk review.

In the event of a major change, which presents a potential risk to regulatory oversight – such as a change in legislation, a re-organization, or incidents that might call into question the status of a regulatory system – a follow-up visit or re-benchmarking activity should be scheduled to assess the potential impact on the regulatory system.

## 6.10 Customization

The context and objective of benchmarking may differ from one country to another. Therefore, it is essential that the benchmarking methodology and tools are sufficiently flexible to fit the targeted country and purpose. Customization is the means by which the benchmarking methodology and tool are adjusted to meet the pre-set expectations and agreements between the Member State and WHO. Customization does not alter or negatively impact the benchmarking process or tool. Rather, it is meant to utilize the essential and applicable parts of the benchmarking process and tool.

The following examples of customization of the standard benchmarking process provide additional elaboration. The benchmarking process is intended to meet specific objectives and ensure the best use of resources. Benchmarking customization should not, by any means, compromise the assurance of the maturity level of the benchmarked regulatory system. Any proposed customization should be discussed and agreement reached between the Member State and WHO well in advance of the benchmarking process; discussions should be based on mapping of regulatory system and functions. Ideally, regulatory system and functions mapping should be part of the introductory visit or self-benchmarking exercises.

### 6.10.1 Benchmarking of regulatory functions in different regulatory settings

The GBT is designed to be used across the spectrum of regulatory models and levels of sophistication, as well as across categories of medical products. Adaptation to the specific country context does not alter the GBT application or methodology; rather it affects which regulatory functions, indicators, sub-indicators and fact sheets are appropriate for the particular regulatory system and its current circumstances. The ability to adapt or "customize" the GBT in this way is a strength of the tool and its associated methodology, as illustrated in the following table and reflected in the terms of reference for a given benchmarking activity.

Adjustments are subject to discussion with the country. Examples of such adjustments include, but are not limited to, the following cases.

**Table 2 Examples situations and adjustments of benchmarking activities in consideration of regulatory context**

| Example situation | Suggested adjustment |
|---|---|
| Country requests benchmarking of medicines or medical devices only. | Non-common regulatory functions (e.g. lot release) would not be included in the scope of the benchmarking, as these do not apply to medicines or medical devices. |
| Country does not conduct domestic or overseas GMP inspections (e.g. if no medical products are domestically manufactured and no overseas inspections are conducted, because the reliance model is applied to ensure compliance with GMP for imported medical products). | The GMP part of the regulatory inspection function would be excluded from the scope of benchmarking. Nevertheless, regulatory inspections of Good Distribution Practices and Good Clinical Practices would still apply, as appropriate. |
| Country requests benchmarking of vaccines only while securing its vaccines through United Nations supply. As per WHO recommendations, the importing country would not conduct testing and lot release for WHO prequalified vaccines; instead, these two functions would be undertaken by the vaccine-producing country. | NRA lot release and laboratory testing would be excluded from the scope of benchmarking. |
| Country requests benchmarking of whole blood and blood components only. | Registration, marketing authorization and NRA lot release, as well as other sub-indicators that do not address whole blood or blood components (as indicated under the scope section in the fact sheets), should be excluded from the scope of the benchmarking process. |

### 6.10.2 Rapid benchmarking

The “rapid” (or abridged) benchmarking programme is appropriate for use where the capacities of the regulatory system or functions are already well known. For example, the GBT may be used for benchmarking of the relevant regulatory system within the context of self-benchmarking, facilitated self-benchmarking or formal benchmarking, up to a certain maturity level for all or some regulatory functions. In practice, this means that the tool will be customized for the benchmarking of indicators and sub-indicators related to ML1 and ML2 for the regulatory system (and for certain other regulatory functions), while potentially benchmarking up to ML3 for other functions.

Similarly, rapid benchmarking may ignore some regulatory functions altogether, if there is agreement with the relevant NRA and this is compatible with the objectives of the rapid benchmarking exercise. For example, rapid benchmarking within the context of harmonization of registration requirements and processes for generic medicines would ignore non-bio-equivalence clinical trial studies, which may not be required for generic medicines.

### 6.10.3 Decentralized regulatory system

Customization of the tool and related process may also occur when benchmarking a decentralized regulatory system where responsibilities for various functions are performed either at the central (national) or state (provincial) level. Prior mapping of different regulatory functions is essential to identify the institutions and levels of government responsible for different functions.

In this case, the tool may be customized to assess only those functions performed by state (provincial) authorities, simplifying the self-benchmarking or benchmarking process. Similarly, regulatory functions performed by the central authorities would be benchmarked at the central level.

The scenario varies significantly from one country to another. Therefore, prior agreement between the relevant NRA and WHO is essential.

## 6.11 Other activities to further measure regulatory performance

The vigilance field visit and observed audit of regulatory inspection are complementary to the formal WHO benchmarking activity. While the GBT remains the foundation for assessing regulatory inputs, processes, outputs and outcomes, the activities described below are meant to provide a more detailed picture of how certain regulatory functions operate through an expanded performance assessment process. WHO has extended performance assessment activities within the context of the WLA framework.

### 6.11.1 Vigilance field visit

A field visit might be warranted prior to the formal benchmarking in order to document the performance of haemovigilance and medicine and vaccine vigilance programmes. Information and evidence collected through the field visit will be documented and used for the relevant sub-indicators of the vigilance regulatory function.

Further details can be found in the respective manual, which summarizes different activities for preparing, conducting and reporting the vigilance field visit.

### 6.11.2 Observed audit of regulatory inspection

The observed audit aims to assess the performance of the regulatory inspection function with an emphasis on inspection activities and inspectors' competency and attitudes. The observed audit is normally conducted a few months or weeks prior to the formal benchmarking. Outcomes of the observed audit are documented and used for the relevant sub-indicators of the regulatory inspection function.

Applying the concepts and principle of risk-based approach along with WHO guidelines on good reliance practices, observed audit would normally be excluded in case of regulatory authorities which are active members of the Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S).

Further details can be found in the respective manual, which summarizes different activities for preparing, conducting and reporting the WHO observed audit.

# 7 Roles and responsibilities

## 7.1 National regulatory system (authority)

WHO benchmarking is a voluntary process based on a country's request. Consequently, the entity (or entities) in charge of the national regulatory system is a main contributor to the benchmarking process and its outcomes.

The entity (or entities) in charge of the national regulatory system of medical products is responsible for:

- expressing interest and communicating a request for WHO benchmarking, either for capacity-building and RSS or for recognition as a WLA. Country requests should follow the applicable WHO rules and procedures (for example, channel the request through the country office);
- allocating the necessary resources (including human, financial, equipment and information management systems) to manage and support the benchmarking process;
- assigning a multi-disciplinary team consisting of a sufficient number of staff from the applicable regulatory system and functions;
- assigning one (or a few) focal points for contact with WHO on benchmarking-related subjects, including access to the WHO information-sharing platform;
- following the roadmap and adhering to agreed timelines for benchmarking-related activities (for example, introductory visit, self-benchmarking, and corrective and preventive action plan);
- filling in the cGBT along with the relevant documented evidence and uploading this evidence into the WHO information-sharing platform;
- contributing to attainment of any necessary national clearances for benchmarking-related activities; and
- interacting openly and constructively with WHO staff, consultants and advisers, including the benchmarking team, during all benchmarking-related activities.

To ensure smooth and secure sharing of benchmarking-related information, which may be deemed confidential, the benchmarked NRA and WHO may, if necessary, engage in a Confidential Disclosure Agreement. Annex 4 of this manual can be used for this purpose.

## 7.2 WHO headquarters

WHO headquarters (RSS team), in collaboration with the six WHO regional offices and relevant country offices, is responsible for:

- Global Public Health Good:[11] benchmarking policy, tools, databases, training (of regional offices and partners on GBT-related aspects) and ensuring consistency in quality and approach (as part of quality management approach);
- leading the benchmarking of regulatory systems seeking ML3 or ML4 status;

11 Includes the maintenance and improvement of the GBT, this manual, associated standard operating procedures and manuals and other guiding documents; establishment and maintenance of a roster of qualified assessors; and development of training materials for GBT assessors.

- leading the benchmarking of regulatory systems seeking to become a WLA;
- leading the benchmarking of regulatory systems in vaccine-producing countries;
- assisting regional offices, as requested, in the provision of specialized technical assistance; and
- developing and maintaining global regulatory databases and information technology (IT) systems, including data management, data analysis and regulatory intelligence.

WHO headquarters, regional offices and country offices contribute to IDP implementation and the monitoring of progress, as agreed between the three levels of WHO and made possible through available resources. These activities also include coordination of external support through the Coalition of Interested Parties. Whenever possible, coordination and monitoring of IDP implementation should be led by a designated resource at the country level.

## 7.3 WHO regional offices

In addition to contributing to the aforementioned activities, regional offices assume primary responsibility for:

- benchmarking and strengthening of regulatory systems at ML1 and ML2, as well as those seeking regional recognition.[12] These activities are supported by WHO headquarters as necessary;
- providing oversight of and assistance to the processes of IDP implementation and monitoring of follow-up;
- coordinating all activities and meetings with the NRA that involve the three levels of WHO; and
- acting as the official contact point with WHO representatives on benchmarking activities.

Regional offices should also report any changes in the status of regulatory systems to WHO headquarters, given that the RSS team is responsible for maintaining up-to-date global databases on the status of national regulatory systems.

## 7.4 WHO country offices

The country office should be involved in all RSS activities, including benchmarking and capacity-building, and should provide the necessary administrative and technical support to the benchmarking team. Administrative support provided by the country office includes, but is not limited to, serving as liaison with the NRA and ministry of health.

As noted, coordination and monitoring of IDP implementation should be led, whenever possible, by a designated resource at the country level.

In all cases, WHO internal policies and procedures on engagement with countries should be respected and followed.[13]

12 For example, NRAs of regional reference in WHO Region of the Americas (PAHO).
13 Guidelines for working with WHO offices in countries, territories and areas, 2022.

## 7.5 Responsible Officer

The designated Responsible Officer[14] at WHO headquarters or the regional office is responsible for overseeing the planning and execution of regulatory system benchmarking and its follow-up activities.

The responsibilities of the Responsible Officer are listed below:[15]

a) Plan, schedule and organize the regulatory system benchmarking (including pre-benchmarking steps), follow-up visits and re-benchmarking.
b) Coordinate with other WHO teams, and specifically with the WHO prequalification team, for the benchmarking of regulatory systems that oversee medical products that are prequalified or proposed for prequalification.
c) Ensure that the country's invitation to undertake benchmarking is received by WHO before the visit.
d) Commission a desk-based screening of regulatory system functions, if the regulatory system information is accessible through the internet or any official published documentation.
e) Conduct or commission an introductory visit to the NRA prior to the benchmarking visit to explain the benchmarking tool and process; determine the data that are available to WHO; identify any additional data that are needed; and initiate or plan a self-benchmarking process.
f) Provide support, if needed, to assist the NRA to perform the self-benchmarking, including, for example, the organization of the self-benchmarking workshop.
g) Approve candidate assessors for the regulatory system benchmarking, follow-up visits and re-benchmarking; determine their availability; provide their profiles to the country; and secure country clearance for their participation.
h) Brief new assessors and WHO staff, as required, on the purpose of benchmarking and the benchmarking tool and process, and provide assessors with access to the information-sharing platform server and all relevant documents.
i) Assess understanding and secure agreement of the qualified GBT assessors by completing and signing confidentiality and "conflict of interest" forms prior to a visit.
j) Prepare (or commission) and review documentation for each NRA visit, including the terms of reference and slide presentation to be used.
k) Ensure that an IDP is submitted to the benchmarked NRA following the formal benchmarking.
l) Ensure timeliness of all benchmarking-related activities.
m) Initiate the process of IDP implementation whenever possible by sharing the IDP, including training needs, with the relevant WHO officers, and discussing proposed training activities or requested technical support. Another (possibly complementary) approach is to utilize the resources of the Coalition of Interested Parties, based on defined roles and responsibilities. When used, this approach is led by WHO.
n) Ensure all relevant WHO staff at different organizational levels (headquarters, regional offices and country offices) are kept informed of benchmarking visits and outcomes. This may also extend to external WHO parties, for example, participants engaged in the Coalition of Interested Parties.

14 It is the responsibility of the relevant leadership at WHO headquarters or regional offices to designate the Responsible Officer according to the applicable rules and procedures. At WHO headquarters, the designated Responsible Officer is usually the RSS Team Lead.

15 The Responsible Officer assumes ultimate responsibility for ensuring that these steps are undertaken for each country engagement. The actual execution of many of these tasks, however, would normally be undertaken by the Team Leader or other designated WHO official, with the exception of a, b, i, l, m and n.

## 7.6 Benchmarking team

This section focuses specifically on roles and responsibilities of the team members assigned to formal benchmarking.

The benchmarking team should be composed of qualified benchmarking assessors who are competent in their respective field of regulatory oversight. All invited regulatory assessors are selected based on their qualifications (as described in Section 8) and track record in regulatory excellence.

### 7.6.1 Team Leader

The Team Leader of each benchmarking is assigned by the designated Responsible Officer in charge of the regulatory strengthening programme and should be a WHO staff member.[16]

The benchmarking Team Leader has the primary operational responsibility for planning and conducting the regulatory system benchmarking. They are therefore responsible for ensuring that all assessors and NRA staff are familiar with the benchmarking methodology. The Team Leader should also oversee the proper and timely development, distribution and archiving of the benchmarking report, as per the relevant methodology and procedures included in this manual. As noted earlier, the designated Responsible Officer has overall responsibility for all steps involved in strengthening a given regulatory system.

The following responsibilities are assigned to the Team Leader:

a) Assemble the benchmarking team.
b) Prepare documentation for each NRA visit, including the terms of reference and slide presentation to be used.
c) Meet and brief team members prior to the benchmarking; discuss the terms of reference, agenda and plans for the visit.
d) Divide team members into groups according to their experience and the expertise needed for the regulatory functions to be benchmarked. The number of assessors varies according to the size of the NRA, and the country and complexity of the system and functions being assessed. For more complex benchmarking activities – as when the regulatory system is scattered over several institutions or levels (for example, central and state or provincial levels) – the WHO Responsible Officer may assign two assessors to each regulatory function to allow for a peer-validated assessment. Such decisions are made in agreement with the benchmarking Team Leader and are based on their understanding of the context and complexity of the relevant regulatory system. Paired assessors, when used, may be assigned more than one regulatory function. In less complex situations, one assessor per function may suffice.
e) Assign and clearly communicate roles, responsibilities and reporting hierarchy to every member of the team. This is especially important when multiple assessors are assigned to the same or similar functions (that is, paired assessors).
f) Distribute an electronic copy of the cGBT to each team member to use when assessing the assigned function(s), according to the team member's terms of reference for the visit.
g) Serve as the expert on the benchmarking process and on quality assurance.
h) Conduct the initial briefing meeting held at the beginning of the visit to present the objectives and expected outcomes of the visit and to reach formal agreement with the NRA on the agenda.

16 http://www.who.int/wer/2008/wer8320.pdf accessed on 18 December 2017

i) Meet with all team members at the end of each day to receive and discuss feedback, findings and recommendations from the different groups, and to share information and documents collected by team members (daily wrap-up session).
j) Chair and lead discussion among the benchmarking team during the closed wrap-up session, conducted one day before the end of the benchmarking visit. The closed session is restricted to assessors and WHO staff; the purpose is to present, defend and modify findings, observations, scores and recommended actions to address gaps.
k) Collect benchmarking data, including recommendations from all team members to be discussed at the debriefing meeting, and prepare the preliminary draft of the regulatory system benchmarking report (see Section 6.6, under preliminary draft benchmarking report); this should include the first draft of the IDP. The Team Leader should copy and send the preliminary draft benchmarking report to all team members.
l) Serve as the lead when presenting draft findings and recommendations to senior NRA officials and representatives from related institutions during the technical debriefing meeting, and correct or amend the report as necessary based on further information and clarifications. The goal is to reach consensus (when possible) before the presentation at the closeout meeting on the final day of the visit.
m) Anticipate and take the lead in resolving any potential issues that may arise (see Section 6.6, "Dissenting opinions" under "Points related to the actual benchmarking process").
n) Conduct the closeout meeting held at the end of the benchmarking visit with the concerned authorities and staff. The Team Leader presents and explains draft findings, recommendations and the IDP; responds to questions or concerns; and explains subsequent steps and timeframes, including the timeframe for resolution of critical deficiencies. Electronic copies of the presentation delivered at this meeting are provided to the NRA and the relevant WHO regional and country office representatives.
o) Prepare the final report and, following review by the designated Responsible Officer, post it on the information-sharing platform server within the aforementioned timeline.
p) Ensure that all data entries relevant to the benchmarking are completed within the indicated timeframes, and, for benchmarking linked to prequalification of vaccines, ensure that the prequalification team Unit Head has received a copy of the report.
q) Coordinate with the prequalification team and other relevant WHO teams when necessary, and convene an ad-hoc advisory committee to review the outcome of the benchmarking.
r) Ensure continuous follow-up of IDP implementation, including, when indicated, follow-up visits or re-benchmarking within the agreed timeframes.

### 7.6.2 Team members

Team members should be selected from the roster of qualified GBT assessors. The Responsible Officer, in discussion and agreement with the assigned Team Leader, will designate the proposed assessors.

The responsibilities of the team members include the following:

a) Review and sign the relevant administrative documents, including invitation letter, confidentiality agreement and Declaration of Interests (DOI).
b) Make necessary travel arrangements (for example, book flights and obtain visa), as described in the invitation letter.
c) Create a user account and confirm access to the NRA information-sharing platform site, which is used to share reference documents and all information related to the visit.
d) Read the terms of reference and attached programme for the visit.

e) Read the WHO manual for benchmarking of the national regulatory system of medical products.
f) Read the benchmarking indicators and sub-indicators, including relevant fact sheets, for assigned regulatory functions and the regulatory system. In case of any ambiguity, clarification should be sought from the Team Leader before benchmarking. The GBT, including fact sheets, is available at: who.int/tools/global-benchmarking-tools.
g) Take and pass the necessary benchmarking training (see next section).
h) Ensure the ability to work on the cGBT, including, for example, the availability of a computing device with suitable configuration. Each team member should ensure that their laptop has updated antivirus software and that it has been scanned for possible viruses or malware immediately before starting their benchmarking activities. Team members are requested not to create or use any hard copies. All related documents should be scanned and attached in electronic format.
i) Prior to the benchmarking visit, read the self-benchmarking report prepared by the NRA, validated by WHO and uploaded to the information-sharing platform.
j) Participate in all briefing sessions in preparation for the benchmarking visit and all group meetings during the visit.
k) Perform desk review of completed cGBT, along with the relevant documented evidence (for example, through the information-sharing platform) prior to benchmarking, to ensure proper use of time during formal benchmarking.
l) Perform the benchmarking of assigned regulatory functions. If more than one person is assigned to the same function, team members should split the work among themselves, so that the related function can be benchmarked in more detail. Each assessor should consider the necessity of cross-referencing one another's assessments. Proposed scores and recommendations should be discussed among assessors, and with the benchmarking team and NRA staff, for input and consensus building.
m) Deliver the following materials in a timely manner to the Team Leader:
   – PowerPoint presentations using the WHO templates provided;
   – an electronic folder with all documents reviewed – these should be numbered and named to match the indicators benchmarked (if not already available on the information-sharing platform); and
   – the completed benchmarking tool software (cGBT).
n) Present and explain findings on behalf of the team assigned to a designated regulatory function or system. Each team should select the best communicator.
o) Review comments provided by the NRA on the preliminary draft benchmarking report, while respecting the relevant timelines.
p) Comply with safety and security policies when visiting facilities, including immunization requirements (if any) and bringing a copy of immunization certificates. There should be no waiver for any WHO team member, including WHO staff, for compliance with the established immunization requirements.
q) Obtain any vaccinations or medicines necessary to ensure health and safety during the visit.
r) Respect all applicable protocols and codes of ethics and conduct.

It is essential that team members are familiar with all documents described above and come fully prepared for the visit.

### 7.6.3 Observers

WHO may invite other participants as observers to benchmarking visits. This may include candidate assessors (as noted earlier); regulators preparing for benchmarking in their countries; technical or development partners contributing to RSS under the Coalition of Interested Parties; and WHO staff working in other departments or units, whose work relates to RSS.

As previously noted, a list of proposed benchmarking team members and observers, along with their curricula vitae, is conveyed to the NRA for information and comment, and to obtain government clearance for non-WHO assessors and observers.

No specific roles or responsibilities are assigned to observers. But similar to team members, observers should consider the following:

a) Review and sign the relevant administrative documents, including invitation letter, confidentiality agreement and DOI.
b) Make necessary travel arrangements (for example, book flights and obtain visa), as described in the invitation letter.
c) Comply with the immunization requirements and bring a copy of immunization certificates when visiting facilities.
d) Obtain any vaccinations or medicines necessary to ensure health and safety during the visit.
e) Respect all applicable protocols and codes of ethics and conduct.
f) Observe one or more team members during the benchmarking activity. Observers may seek clarification from team members, provided they do not negatively impact team members' work.
g) Report back to their institutions about the benchmarking visit, so that the objectives of the observation of the formal benchmarking are met.

In all cases, observers should not be actively involved in the benchmarking process (that is, they should refrain from performing any assessment or interview).

# 8 Team members: competencies and training

Assessors' competencies must be evaluated prior to selection, to ensure high-quality output from the benchmarking team and consistency in benchmarking visits.

A multi-disciplinary team will be assembled with the necessary experience, skills and abilities, including dealing with the relevant regulatory functions, working effectively as a team, respecting diversity, and exercising tact, diplomacy, performance under pressure, and good judgment and communication skills.

To select assessors with the required expertise, the scope of benchmarking should be considered. For example, if the purpose of benchmarking relates to medicine or vaccine regulation, assessors with knowledge and experience in this field should be selected. In all cases, assessors should have adequate scientific and technical knowledge and experience to assess the assigned regulatory functions and product categories using GBT indicators.

A roster of qualified international experts eligible for benchmarking regulatory systems has been established and is regularly updated by WHO headquarters. This roster can be utilized by WHO at all levels for the purpose of benchmarking-related activities. Information available at regional levels will be used to develop and update the global roster of experts. In addition, regional and country offices can provide feedback to complete or update the global roster when needed – for example, when new personnel with required expertise are available, or a former expert is no longer employed by an NRA.

Before undertaking their duties as part of the benchmarking team, assessors must also successfully complete the necessary training on WHO benchmarking methodology and use of the cGBT. Training on the tool is available online (refer to Section 11.1: cGBT). Certificates issued following successful completion of the training are valid for two years.

Training on the conduct of benchmarking activities has been developed and rolled out to complement this manual.

Training of junior assessors is acquired through preparatory briefing sessions prior to the visit, a system of mentorship provided by senior assessors, and pairing with other assessors during activities.

# 9 Conflicts of interest, code of conduct and confidentiality

## Conflicts of interest

WHO values and relies on the technical advice of leading subject matter experts in the context of its advisory and technical committees, meetings and other activities. Such advice contributes to the formulation of public health policies and norms that are promulgated by WHO for the benefit of Member States.

To ensure the integrity of such processes, it is critical that WHO staff and assessors appointed by WHO to benchmark regulatory systems comply with the following guidelines:

a) Fully and honestly disclose in the DOI form all relevant interests and biases that may give rise to real or perceived conflicts of interest.

b) Spontaneously report, on an ongoing basis, any material changes to their disclosed interests during their time serving WHO.

c) Respect the confidential nature of the advisory function assigned by WHO and make no public statements regarding the assessor's advice without prior consent from WHO.

d) Refrain from engaging in any activity that may bring reputational harm to the WHO benchmarking process.

e) Represent their views in a personal and individual capacity, keeping in mind the best interests of WHO, as opposed to the views of their employers, other institutions or governments.

f) Respect the host country's cultural differences and dress codes. Team members are advised to wear official attire for opening and closing meetings.

To reduce any potential conflicts of interest, team members including WHO staff should not be part of the formal benchmarking team if they have provided the NRA under assessment with technical support, capacity-building, advice or similar support.

## Code of conduct during benchmarking activities

The benchmarking team is led by a WHO Team Leader. Team members should respect the communication hierarchy established by the NRA and WHO Team Leader. Team members are expected to treat NRA staff members with respect and to exercise tact, diplomacy and good judgement. This is particularly important in instances when NRA staff may be apprehensive about the benchmarking outcomes. It is important that NRA staff feel comfortable when being interviewed.

Team members are to observe, collect and assess information, and to formulate draft findings and recommendations. They should not simply communicate gaps, lecture or in any way impose their own way of undertaking regulatory activities.

The WHO team should not enter any premises without being invited by the relevant entity's representative. They should always be accompanied by an official representative of the NRA.

No document should be collected or copied without consultation with the Team Leader and prior authorization from the NRA, as the document may serve as official evidence of findings. Furthermore, benchmarking visits are generally paper free (that is, paper copies are not normally collected as part of the benchmarking exercise).

## Confidentiality

All documentation and information related to the benchmarking that are not in the public domain or designated "non-confidential" by the national authorities, must be considered by all benchmarking assessors and observers to be strictly confidential. No report or benchmarking outcome should be disclosed to any external parties, unless disclosure has been approved by the relevant benchmarked authorities. In such instances, disclosure would be through designated WHO channels.

Prior to the benchmarking visit, confidentiality and DOI forms must be completed and signed by all non-WHO team members. Completed forms should be checked and archived by the WHO Team Leader and Responsible Officer before the visit. These forms will be available at WHO and may be shared with the relevant authorities, if required. WHO staff are similarly bound by confidentiality provisions, as stated in the WHO code of conduct.

The WHO team should never mention the findings from other benchmarking visits, as this information is strictly confidential.

# 10 Complaints management (appeal process)

In some instances, the NRA may disagree with the findings and assigned maturity rating from a formal benchmarking activity. If the benchmarking activities were led by WHO headquarters, a formal appeal of the findings may be submitted to WHO through the country office. The relevant WHO Director should reply to the appeal within 60 calendar days. The appeal process may involve an ad hoc committee to advise on the submitted appeal. If the benchmarking activities were led by the regional office, the complaint and appeal process should be managed according to the respective arrangements and procedures of the regional office.

# 11 Information management systems

## 11.1 Computerized Global Benchmarking Tool (cGBT)

The benchmarking process is an information-intensive exercise that involves the collecting, sharing, processing, analysing and storing of large amounts of information, much of which is confidential. The cGBT is an electronic means to facilitate and manage these activities during the benchmarking process. The cGBT contributes to resource-saving for the NRA and WHO within the context of the benchmarking (that is, more efficient use of NRA staff, WHO staff and external assessors).

The cGBT facilitates all steps of the benchmarking process, including advance preparation, conduct, conclusions and automated report preparation. It also facilitates information-sharing and transparency.

The latest versions of the cGBT, cGBT manual and online training module are available to NRAs on the secure WHO RSS information-sharing platform (https://worldhealthorg.sharepoint.com/sites/ws-att/RSS_Benchmarkingtool/Forms/AllItems.aspx). These resources can also be requested by other interested stakeholders through the designated Responsible Officer.

The cGBT is a desktop application, which is available on Windows and macOS. The minimum system requirements to run the application are as follows.

### Windows version

- Processor: 64-bit (x64) processor
- RAM: 2 GB minimum (4 GB recommended)
- Operating Systems: 64-bit (x64) Windows 7 or later

### Mac version

- Processor: 64-bit (x64) processor
- RAM: 2 GB minimum (4 GB recommended)
- Operating systems: 64-bit (x64) macOS (an update to the latest macOS version is recommended)

### cGBT online training

The link to the computer-based training on the cGBT, which is available in several languages, is provided below. From this training, users can learn about the cGBT and receive instructions on its use. https://worldhealthorg.sharepoint.com/sites/ws-att/SitePages/cGBT.aspx#cgbt-online-training

## 11.2 Distribution and archiving of reports

**Master files**

The electronic copy of the final report is stored on the WHO NRA information sharing-platform in a password-protected folder. This master file includes all documents collected before, during and after the formal benchmarking activity; all correspondence, pre-screening information, analyses, presentations and pictures taken by team members during NRA visits; and any other reports related to the benchmarking process.

All documents and reports in the master file are archived as confidential documents with restricted access. All archives are kept as electronic documents and only distributed on a need-to-know basis. Requests for official copies of master file documents should be submitted to WHO headquarters. Distribution of copies, either inside or outside WHO, is possible only if WHO has obtained clearance from the NRA.

Working documents used by team members should be destroyed. External team members' access to the information-sharing platform should be discontinued once the report has been finalized and submitted to the NRA.

**Access to the WHO information-sharing platform**

Access to the WHO information-sharing platform is controlled and password restricted. The RSS SharePoint is access-restricted. Access should only be granted after the confidentiality agreement and DOI forms have been signed. The SharePoint administrator can then grant access to users.

- WHO staff can use their WHO identity management system account credentials to access the secure WHO information-sharing platform after receiving the SharePoint invitation.
- Non-WHO staff (for example, external team members) can gain access using their personal or organisational account after receiving the invitation.

Users may receive one of two invitations.

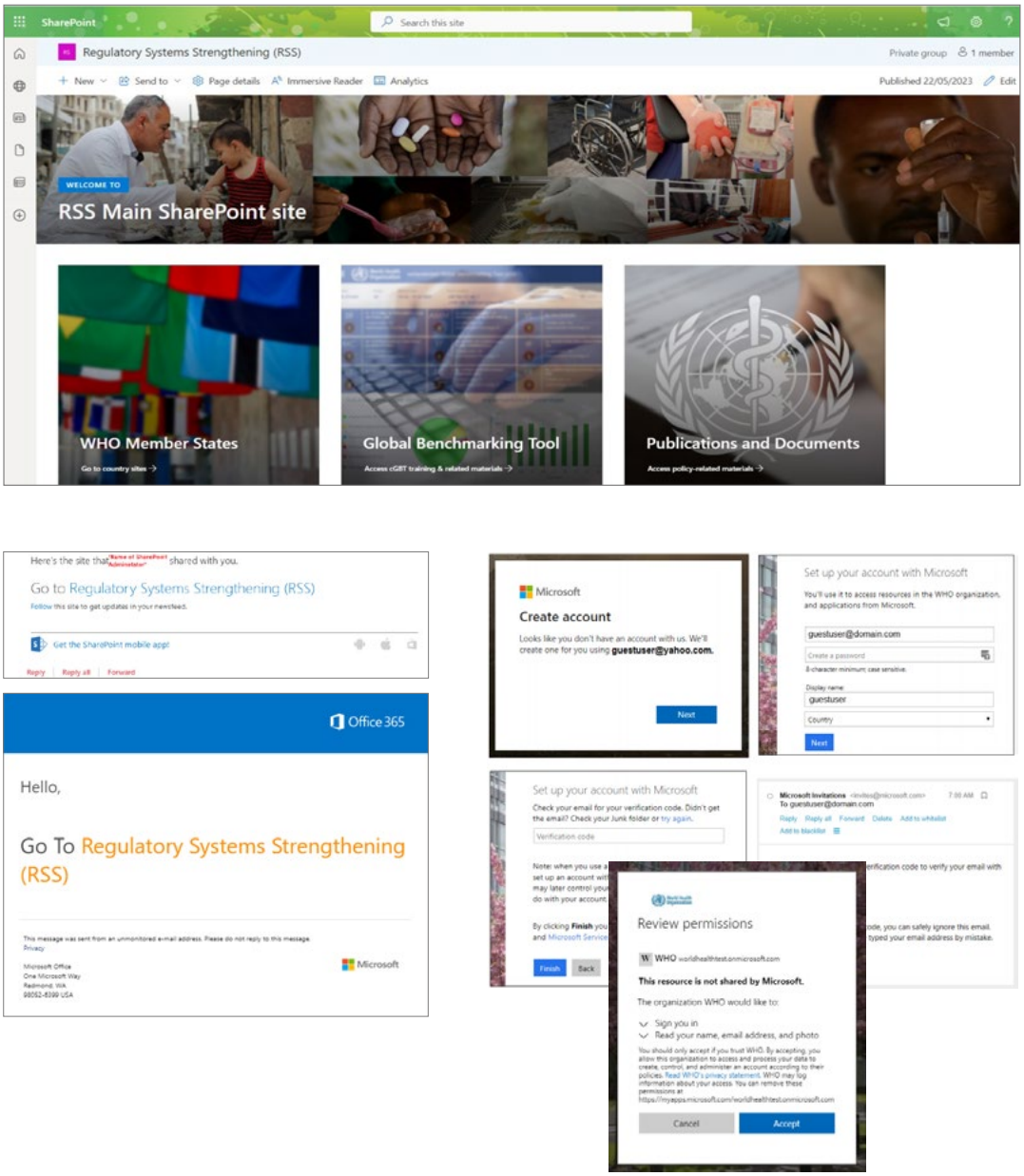
The invitation shown below indicates that the user's account is recognized by the organisation. The user can then log in using their existing credentials.

Alternatively, the following invitation means that the user is required to link their email address to a Microsoft identity for authentication purposes.

Instructions for users

- Follow the screen prompts and instructions to initiate setup (as shown in Fig. 7).
- Be sure to check for the verification code, which will be sent by email during the verification process.
- Save and remember the password. The password and email address will be needed to log into WHO resources and any other Microsoft Cloud resources required in the future.
- When logging in for the first time (or if asked to link to a Microsoft identity), the user will receive the following prompt. The user should "Accept" WHO review permissions and authenticate the login. This step concludes the authentication process.

**Figure 7 WHO NRA information-sharing platform – main menu and other informative screen prompts**




### Distribution of the final benchmarking report

The final benchmarking report should be posted on the NRA information-sharing platform. Distribution of the report is restricted to NRA and WHO staff, including WHO regional and country office staff who were involved in the benchmarking or responsible for its oversight. The regional and country office should specify those to whom the report should be distributed prior to its issuance. They should also ensure confidentiality for all reports distributed. A list of all WHO staff receiving the report should be communicated to WHO headquarters.

# 12 Transparency and information-sharing

As noted in the WHO Constitution, "Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people." WHO is committed to transparency in all its activities. RSS and regulatory system benchmarking are not exceptions in this context. To this end, WHO has made the GBT publicly available. This manual – which is essential to a proper understanding of how the GBT is applied in the benchmarking of regulatory systems – is also available on the WHO website.

WHO considers transparency of benchmarking operations and outcomes critical to promoting RSS and enhancing reliance among regulatory authorities. While benchmarking information and outcomes are owned by the relevant Member State, there are many incentives for countries to share their information. Key among these are to facilitate capacity-building support, increase public trust, enhance regulatory cooperation, and promote trade and export of quality medical products.

As noted, the consent-based sharing of benchmarking activities and results, notably the IDP, is necessary to enable a coordinated approach to capacity-building. Sharing of this information also serves to mobilize donor support for meaningful capacity-building efforts.

If necessary, to ensure smooth and secure sharing of benchmarking-related information, which may be deemed confidential, the benchmarked NRA and WHO may engage in a Confidential Disclosure Agreement. Annex 4 of this manual can be used for this purpose.

WHO intends to introduce greater transparency of benchmarking outcomes with the introduction of the WLA framework. While still under development, one could foresee two levels of transparency involving: 1) the public; and 2) other NRAs that have also gone through the WLA process (that is, via a secure platform).

As interim measures, WHO encourages the disclosure of the benchmarking outcomes as follows:

1. For regulatory systems benchmarked as ML3 and ML4, the outcomes of the benchmarking results would be published on the WHO website as part of the pre-agreement reached in relation to the benchmarking exercise.
2. Upon request, detailed benchmarking data of a particular regulatory system can be shared with donors, implementation partners and other countries, provided that the consent of the NRA to share its data with the requesting entity is obtained. Such an approach is also central to a proactive effort by the Coalition of Interested Parties to provide regulatory support.
3. Selected anonymous data can be disclosed for the purpose of highlighting key regulatory challenges and trends.

More broadly speaking, transparency is a key enabler for adopting new, more efficient ways to conduct regulatory operations, both locally and internationally. It is incumbent upon NRAs to practice transparency in regulatory operations and decisions – not only as a fundamental principle of Good Regulatory Practices and "open government", but also as a way to build trust and maximize opportunities for cooperation and reliance, as part

of a shared regulatory community responsibility. In other words, regulatory authorities are an increasingly important audience for and beneficiary of measures that promote transparency in regulation through the publishing and sharing of regulatory information.

A high level of public trust and confidence in the regulation of medical products is in the best interest of all stakeholders, including patients, consumers, governments, healthcare professionals, manufacturers, distributors and procurement agencies. Trust depends, in part, on regulations that are seen to be proportionate to policy objectives, that are developed openly and transparently, that are effective in achieving their goals, and that are enforced appropriately, fairly and in a timely manner.

Transparency, then, is the hallmark of a well-functioning regulatory system. Transparency indicators embedded within the GBT consequently provide an important measure of a regulatory system's maturity.

# 13 References

This manual was developed based on several other documents and guidance, including those belonging to GBT predecessor tools – for example, the WHO vaccine assessment tool and Pan American Health Organization (PAHO) tools. The following non-exhaustive list is provided to recognize the valuable inputs that were taken into account to develop and produce this manual.


1. WHO manual for benchmarking of the national regulatory system for vaccines: Part 1: Planning and management for WHO headquarters and regional offices.
2. WHO manual for benchmarking of the national regulatory system for vaccines: Part 2: Procedures for Team Leader and team members.
3. WHO manual for benchmarking of the national regulatory system for vaccines: Part 3: Guiding principles for using the NRA benchmarking tools.
4. Practical guidance for conducting a review (based on the WHO Data Collection Tool for the Review of Drug Regulatory Systems), 2007.
5. Abbreviated procedure for designating regulatory authorities of regional reference for medicines (NRAs of regional reference), WHO Regional Office for the Americas/PAHO.
6. Manual para la evaluación de autoridades reguladoras nacionales de referencia regional para medicamentos y productos biologicos, WHO Regional Office for the Americas /PAHO.
7. Preparation, conduct and validation of self-benchmarking (as part of the National Regulatory Authority Benchmarking Process): Manual for Self-Benchmarking Workshop.
8. Manual for benchmarking of national regulatory system for all regulated health products and technologies, revision dated 28 February 2015.
9. Report of the international consultation of experts on regulatory systems strengthening: policy, strategic directions, benchmarking process and indicators.
10. Regulation of vaccines: building on existing drug regulatory authorities. WHO/V&B/99.10.
11. Training manual: licensing, lot release, laboratory access. WHO/V&B/01.16.
12. Training manual on the critical regulatory function for vaccines: evaluation of clinical performance through authorized clinical trials. WHO/V&B/03.12.
13. Procedure for evaluating the acceptability in principle of vaccines proposed to United Nations agencies for use in immunization programmes. WHO/IVB/05.19.

# Annex 1: List of documents, including manuals and procedures, that complement WHO benchmarking manual

This manual is complemented by several other documents, as listed below. Some of these documents are publicly available, while others are only for internal use by WHO and are therefore not published.

1. Manual for preparation, conduct and verification of self-benchmarking.
2. Manual for planning, conduct and reporting of observed audit for assessing regulatory inspection.
3. WHO Global Benchmarking Tool (GBT) for Evaluation of National Regulatory System of Medical Products – Revision VI.
4. WHO Global Benchmarking Tool + Medical Devices (GBT + medical devices) for evaluation of national regulatory system of medical devices.
5. WHO Global Benchmarking Tool + Blood (GBT + blood) for evaluation of national regulatory systems of blood products including whole blood, blood components and plasma derived products.
6. Policy on Evaluating and publicly designating regulatory authorities as WHO listed authorities.
7. Standard Operating Procedure for Change Control of the Global Benchmarking Tool.
8. Standard Operating Procedure for Preparation for Formal Benchmarking Missions (including composition of the team, information sharing, DOI and CA).
9. Standard Operating Procedure for Conduct of Benchmarking Missions.
10. Standard Operating Procedure for Reporting of Formal Benchmarking Missions.
11. Standard Operating Procedure for Risk-based Re-benchmarking.
12. Standard Operating Procedure for Appeal on Conclusion of Benchmarking Missions.
13. Standard Operating Procedure for Verification of Self-benchmarking.
14. Standard Operating Procedure Establishment and Maintenance of Roster of Qualified GBT Assessors.
15. Standard Operating Procedure for IDP follow-up.

# Annex 2: Generic terms of reference: formal benchmarking

The following generic terms of reference serve as a template in drafting terms of reference for formal benchmarking.

World Health Organization

**Strengthening national regulatory systems**
WHO formal benchmarking mission
COUNTRY: add country name in CAPITAL letters
PROPOSED DATE: indicate dates
**Terms of reference**

## Background

World Health Assembly (WHA) Resolution 67.20 on Regulatory system strengthening for medical products recognizes that effective regulatory systems are an essential component of health system strengthening, contribute to better public health outcomes and are necessary to the implementation of universal health coverage. The Resolution also recognizes that inefficient regulatory systems can be a barrier to access to safe, effective and quality medical products.

The World Health Organization (WHO) supports countries in strengthening regulatory systems as a means of promoting equitable access to quality assured medical products. An important area of support involves the benchmarking of regulatory systems as mandated by WHA 67.20, which calls upon WHO to apply assessment tools to generate and analyze evidence of regulatory system performance; facilitate the formulation and implementation of institutional development plans (IDPs); and provide technical support to national regulatory authorities (NRAs) and governments.

The benchmarking referred to in WHA 67.20 implies a structured and documented process by which Member States can identify and address gaps with the goal of reaching a level of regulatory oversight commensurate with a stable, well-functioning and integrated regulatory system. The Global Benchmarking Tool (GBT) represents the primary means by which WHO assesses regulatory systems. The GBT represents the product of over three decades' experience assessing NRAs under the five-step capacity-building model for regulatory systems strengthening (RSS).

These terms of reference are designed for the formal benchmarking of the NRA and other relevant regulatory institutions of name of country, in particular the name of NRA and any affiliated institutions that form part of the benchmarking mission.

Include a summary of prior engagement with the NRA, including self-benchmarking and formal benchmarking missions.
These terms of reference outline the objectives, expected outcomes, deliverables, methodology and scope of the formal benchmarking exercise.

## Objectives

The objective of the mission is to conduct a formal benchmarking of the regulatory programme for scope: medicines, vaccines, blood and blood products and/or medical devices including in vitro diagnostics in country name.

Specific objectives of the mission:

1. Inform name of NRA and other relevant regulatory institutions of name of country on the WHO RSS Programme and the WHO GBT.
2. Benchmark the national regulatory system and functions against the WHO GBT and measure the maturity of the system.
3. Update the IDP for name of NRA and other relevant regulatory institutions of name of country and agree on a roadmap for its implementation.

## Expected outcomes

At the end of the mission, the following outcomes are expected:

1. Documented status of the national regulatory systems, their functions and their maturity level.
2. Identified strengths and gaps for the regulatory system.
3. Agreement on IDP to build on identified strengths and address areas for improvement.

## Deliverables

1. A presentation of findings to the NRA, other relevant regulatory institutions and the WHO Country Office, including measures required to update or amend the final score of indicators or sub-indicators.
2. A draft benchmarking report of the national regulatory system and functions with documented status (maturity level) of the NRA and other relevant regulatory institutions of name of country.
3. A detailed IDP including a training and/or technical support plan and a roadmap for its implementation.

## Methodology

The WHO GBT revision and version number will be used to assess the regulatory system and functions. The benchmarking exercise is prepared, organized and conducted according to quality management system principles and the benchmarking methodology is described in relevant manuals and documents available at the WHO NRA information-sharing platform: https://workspace.who.int/sites/att/default.aspx

Guidance documents include the Manual for benchmarking of the national regulatory system of medical products and formulation of IDPs, revision dated add date.

The benchmarking exercise will identify strengths, gaps and deficiencies and measure the maturity level of the regulatory system and its component regulatory functions. WHO will perform a desk review of existing information and populate the benchmarking tool prior to the mission.

All previous reports and information are archived and stored at the WHO NRA SharePoint site at the following address: http://workspace.who.int/sites/ATT/default.aspx, under the country name site.

The mission is coordinated between WHO headquarters and WHO/regional office as well as the WHO Country Office in country name.

It is imperative that a focal person is appointed by the name of NRA to coordinate the on-site visit with the various departments and institutions involved.

WHO will fund the travel of the WHO team and will organize flight bookings, hotel booking and visa requests.

## Date of the mission

The WHO mission will take place dates of the mission.

## Scope

The scope of the benchmarking exercise will cover indicate scope of benchmarking mission, i.e. medicines, vaccines, blood/blood products and/or medical devices including in vitro diagnostics. Assessors will review relevant documents (i.e. national medical products policy, legislation, guidelines, plans, procedures and other relevant documents) and identify relevant departments, institutions and other organizations directly or indirectly involved in medicines, vaccine, blood/blood product and/or medical devices including in vitro diagnostics regulation.

The benchmarking exercise will focus on the regulatory system for medicines, vaccines, blood/blood products and/or medical devices including in vitro diagnostics including the following:

1. Regulatory policy, legal framework and organizational setup;
2. Regulatory and administrative guidelines, documents, procedures and plans;
3. Financial resources and sustainability;
4. Human resource capacity to undertake the regulatory mandate in terms of qualifications, competencies, skills and experience;
5. Legal provisions and documents, including how they managed, implemented and led to expected results;
6. Monitoring and assessment framework and system;
7. Risk management framework and processes;
8. System of rapid response in the event of public health threats; and
9. Extent to which existing reviews and/or ongoing plans might address identified gaps.

## Relevant institutions and persons

The team will visit list all entities of the NRA, affiliated institutions and other key stakeholders such as the Expanded Programme on Immunization responsible for the following functions:

1. National Regulatory System (RS)
2. Registration and Marketing Authorization (MA)
3. Vigilance (VL)
4. Market Surveillance and Control (MC)
5. Licensing Establishments (LI)
6. Regulatory Inspection (RI)
7. Laboratory Access and Testing (LA)
8. Clinical Trials Oversight (CT)
9. NRA Lot Release (LR)

## WHO team

The WHO benchmarking team will be composed of regulatory experts from NRAs, national professional officers in the WHO Country Office (WCO), if available, and the WHO regional office under the leadership of experts from WHO headquarters.

The proposed composition of the WHO benchmarking team and respective functions to be assessed are provided below.

Indicate the names, titles, positions, duty stations and assigned functions for each benchmarking assessor.

| Duty Station/ Country | Name | Title | Regulatory Function(s) | Institutional Affiliation |
|---|---|---|---|---|
| | | WHO staff title, temporary adviser, WHO consultant, other | Team Leader, assigned regulatory function(s) or IT support | WHO office, home organization, other |
| | | | | |
| | | | | |

## Programme

The WHO visit will be conducted according to the programme below.

A generic outline is provided below as a basis for developing the benchmarking mission programme.

| Start | End | Session and location | Institutions and individuals involved |
|---|---|---|---|
| **Date: arrival and preparations of WHO team** | | | |
| 14:00 | 18:00 | Benchmarking team meeting at hotel | |
| **Date: first day of WHO benchmarking mission** | | | |
| 09:00 | 11:30 | Opening remarks<br>Name of NRA representative<br>WHO Country Representative<br>WHO headquarters: Presentation of WHO RSS Programme, mission objectives, expected outcomes, work programme, and team of assessors<br>NRA overview of the national regulatory system<br>General overview of the national regulatory system (10 min)<br>Registration and marketing authorization (10 min)<br>Vigilance (10 min)<br>Market surveillance and control (10 min)<br>Licensing premises (10 min)<br>Regulatory inspections (10 min)<br>Laboratory access and testing (10 min)<br>Clinical trials oversight (10 min)<br>Lot release (10 min) | Name of NRA representatives<br>WHO Country Representative (or delegate)<br>Name of regional office regional advisors/representatives<br>WHO benchmarking team |
| 11:30 | 12:30 | Benchmarking of regulatory functions by the assigned benchmarking streams begins | Plenary/interview |
| 12:30 | 13:30 | Lunch break (light lunch or lunch boxes recommended) | |
| 13:30 | 17:30 | Benchmarking of regulatory functions by the assigned benchmarking streams (continued) | Plenary/interview |
| 17:30 | 18:00 | Wrap-up of the day and review of next day's programme | WHO benchmarking team (closed meeting) |
| **Date: second day of benchmarking mission** | | | |
| 09:00 | 17:30 | Benchmarking of different regulatory functions by the assigned benchmarking streams (continued) | Plenary/interview |
| 17:30 | 18:00 | Wrap-up of the day and review of next day's programme | WHO benchmarking team (closed meeting) |
| Date: third day of benchmarking mission | | | |

| Start | End | Session and location | Institutions and individuals involved |
|---|---|---|---|
| 09:00 | 17:30 | Benchmarking of regulatory functions by the assigned benchmarking streams (continued) | Plenary/interview |
| 17:30 | 18:00 | Wrap-up of the day and review of next day's programme | WHO benchmarking team (closed meeting) |
| Date: fourth day of benchmarking mission | | | |
| 09:00 | 11:00 | Wrap-up session of WHO team: review of findings of individual work streams<br><br>Discussion and agreement on findings and recommendations to be included in the IDP | WHO benchmarking team (closed meeting) |
| 11:00 | 15:00 | Drafting of the benchmarking report by the different work streams (includes light working lunch)* | WHO benchmarking team (closed meeting) |
| 15:00 | 17:30 | Presentation of preliminary findings to name of NRA senior management for comment and discussion of issues, if any, and how to address | name of NRA senior management<br><br>WHO benchmarking team |
| Date: fifth and final day of benchmarking mission | | | |
| 09:00 | 13:00 | Finalization of findings and recommendations | WHO benchmarking team (closed meeting) |
| 13:00 | 14:00 | Break (light lunch or lunch boxes recommended) | |
| 14:00 | 15:30 | WHO presentation of assessment findings and recommendations, including IDP<br><br>Discussion | name of NRA representatives<br><br>WHO Representative (or delegate)<br><br>name of regional office regional advisors/representatives<br><br>WHO benchmarking team |
| 15:30 | 16:00 | Final remarks and adjournment | Plenary |
| To be scheduled | | Debrief of WHO Representative | Country Office and WHO benchmarking team |

* Includes scoring of indicators and sub-indicators, summary of each function, major findings and progress, IDP, presentation for debriefing session, lists of institutions visited and persons met, and list of evidence uploaded to NRA information-sharing platform and referenced in computerized GBT.

## List of documents and information required for the benchmarking exercise

Information requested below should be provided for all institutions responsible for the regulatory system to be benchmarked.

1. List of staff of the institutions designated to meet with WHO benchmarking team (name, function, title, physical and email addresses, telephone and fax numbers)
2. Structural or governance relationships between all institutions or organizations involved in medicines, vaccines, blood/blood product and/or medical devices including in vitro diagnostics regulation
3. Organogram of the institutions to be visited (including list of staff, titles and qualifications)
4. Presentations on the regulatory system and functions to be benchmarked
5. Legal mandates and acts for the establishment of NRA
6. Mission, vision and objectives of the NRA
7. Acts, laws, decrees, regulations and other legal provisions regarding the national regulatory system, including its implementation, enforcement and financing
8. Strategic and operational plans
9. Emergency preparedness framework and plans
10. Relevant regulatory and administrative guidance documents and guidelines published or in development
11. Quality management system quality manual
12. List of standard operating procedures and other relevant internal procedures
13. Lists of and mandates for technical and expert advisory committees, together with a list of external experts and their qualifications
14. Training and career development programmes, including list of training activities, numbers trained, and any impact assessment reports
15. Monitoring and assessment framework
16. Performance targets for regulatory activities and workload metrics
17. Self-assessment tools and manuals, external audits, annual reports and current IDP
18. Current list of approved medicines, vaccines, blood/blood products and/or medical devices including in-vitro diagnostics.
19. Stakeholder engagement framework, transparency policies and description of information publicly available
20. Website address(es), including those in English, if available
21. Other documents relevant to the benchmarking exercise

Additional documents may be requested depending on the regulatory programme to be benchmarked, for example:

- Description of and key individuals involved in the Expanded Programme on Immunization
- National pandemic influenza preparedness plan
- National deployment and vaccination plan for pandemic influenza vaccines

# Annex 3: Confidential Disclosure Agreement between NRA and WHO

## Confidential disclosure agreement

This Confidential Disclosure Agreement (this "**Agreement**"), effective as from the last date of signature, is entered into by and between:

the **Full name of NRA** (hereinafter "**Acronym of NRA**"), having its headquarters at **please add address of the regulatory authority**, of the one part, and

the **WORLD HEALTH ORGANIZATION** ("**WHO**"), having its headquarters at 20 avenue Appia, 1211 Geneva 27, Switzerland, of the other part.

**WHEREAS** representatives of "**Acronym of NRA**" and WHO (hereinafter referred to jointly as the "**Parties**" and individually as a "**Party**") intend to hold discussions or other exchanges during which a Party ("**Disclosing Party**") may disclose to the other Party ("**Receiving Party**") certain materials, data and other information relating to the benchmarking of "**Acronym of NRA**" in the context of WHO's evaluating and designating of national regulatory authorities (NRAs) as WHO-Listed Authorities (WLAs) and/or to other WHO activities related to regulatory systems strengthening and collaboration, in each case, which the Disclosing Party considers to be confidential and/or proprietary to the Disclosing Party and/or third parties collaborating with it;

**WHEREAS** the aforementioned confidential and/or proprietary materials, data or other information of "**Acronym of NRA**" or WHO, as the case may be, is hereinafter collectively referred to as the "**Information**".

**WHEREAS** "**Acronym of NRA**" and WHO are willing to disclose the Information to each other for the purposes of (i) benchmarking of "**Acronym of NRA**" in the context of WHO's evaluating and designating of NRAs as WLAs; and (ii) conducting other regulatory systems strengthening activities and collaboration including, without limitation, related to WLA (hereinafter collectively the "**Purpose**"); without prejudice to the confidentiality obligations of each Party hereunder.

**NOW IT IS HEREBY AGREED** as follows:

1. The Parties agree that the abovementioned discussions and exchanges, as well as any disclosure of the Information by one Party to the other Party, will take place subject to the following terms and conditions set forth in this Agreement.
2. Any Information disclosed under this Agreement that is provided or otherwise made available: (i) in written or other tangible form, shall be marked as being confidential; or (ii) in oral form, shall be stated to be confidential and shall be confirmed by the Disclosing Party (as defined above) in written summary form within thirty (30) days from the date of oral disclosure.
3. In accepting the Information, each Party shall (subject to the provisions of paragraph 2 above) abide by the following:

   (a). The Information disclosed or otherwise made available by the Disclosing Party shall be regarded by the Receiving Party (as defined above) as confidential and proprietary to the Disclosing Party. The Receiving Party shall use such Information

only for the Purpose and shall make no other use thereof unless and until a further written agreement is signed by the Disclosing Party permitting such other use of the Information.

(b). Nothing in this Agreement shall prevent the Disclosing Party from disclosing its Information to any third party.

(c). Nothing in this Agreement shall be construed as granting to the Receiving Party any rights to the Information other than those expressly set forth in this Agreement.

(d). The Receiving Party shall maintain the Information received from the Disclosing Party in confidence. For a period of five years from the date of disclosure, the Receiving Party shall take all reasonable measures to ensure that the Information: (i) shall not be used for any purpose other than the Purpose; and (ii) shall not be disclosed to any third party, except for a third party who needs to know the Information for the Purpose and who is legally bound by similar obligations of confidentiality and restrictions on use as those contained in this Agreement, in which case the Information shall only be disclosed to such third party to the extent strictly necessary to achieve the Purpose.

(e). The obligations of confidentiality and restrictions on use contained in this Agreement shall not apply to any part of the Information which the Receiving Party is clearly able to demonstrate:

i. was lawfully in its possession and known to it prior to disclosure by the Disclosing Party (as evidenced by written records or other competent proof); or

ii. was in the public domain or the subject of public knowledge at the time of disclosure by the Disclosing Party; or

iii. becomes part of the public domain or the subject of public knowledge through no fault of the Receiving Party; or

iv. becomes available to the Receiving Party from a third party not in breach of a legal obligation of confidentiality or restriction on use; or

v. was subsequently and independently developed by or on behalf of the Receiving Party without access to the Information of the Disclosing Party.

(f). In addition, the Receiving Party shall be permitted to disclose Information received hereunder as may be strictly required to be disclosed by applicable law, provided that the Receiving Party shall immediately notify the Disclosing Party in writing of such requirement and shall provide adequate opportunity to the Disclosing Party to object to or restrict such disclosure, or request confidential treatment thereof.

4. This Agreement shall not be construed as (i) conveying rights under any patents or other intellectual property that either Party may have or may hereafter obtain; or as (ii) placing either Party under any obligation to enter into any subsequent agreements.

5. Upon completion of the Purpose, the Receiving Party shall (unless otherwise agreed in writing by the Disclosing Party) immediately cease all use, and make no further use, of the Information disclosed or otherwise made available to the Receiving Party hereunder. Upon written request from the Disclosing Party, the Receiving Party shall promptly return to the Disclosing Party, or destroy, all of the Information disclosed or otherwise made available to the Receiving Party, except that the Receiving Party may retain one copy of the Information in its files to determine any continuing obligations hereunder.

6. Any notice required or permitted to be given pursuant to this Agreement shall be in writing, in the English language, and shall be sent via registered mail or international courier (postage prepaid) to the Party to be notified at its address shown at the beginning of this Agreement.
7. This Agreement constitutes the entire understanding of the Parties with respect to the subject matter hereof and supersedes any prior agreements, arrangements and/or other communications with respect to such subject matter. This Agreement shall not be modified, except by mutual written agreement, signed by duly authorized representatives of both Parties.
8. Any dispute relating to the interpretation or application of this Agreement shall, unless amicably settled, be subject to conciliation. In the event of failure of the latter, the dispute shall be settled by arbitration. The arbitration shall be conducted in accordance with the modalities to be agreed upon by the Parties or, in the absence of agreement, under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The Parties shall accept the arbitral award as final.
9. Nothing contained in or relating to this Agreement shall be construed as a waiver of any of the privileges and immunities enjoyed by either Party, or any of its officials under national or international law.

Made in two (2) original copies,

| | |
|---|---|
| For and on behalf of the<br>**Name of the NRA in full** | For and on behalf of the<br>**World Health Organization** |
| Name:<br>Title:<br>Date:<br>Place: | Name:<br>Title:<br>Date:<br>Place: |

# Annex 5: Global Benchmarking Tool Quantitative Indicators (GBTQI)

| # | Indicator | Related function |
|---|---|---|
| QN01 | Total **annual** budget | RS |
| QN02 | Total number of **full time staff** at the national regulatory authority at central (federal) level | RS |
| QN03 | Total number of **full time staff** at the national regulatory authority at all other peripheral levels | RS |
| QN04 | Number of **full time staff** with postgraduate education – master's / doctorate / other (specify) | RS |
| QN05 | Percentage of medical product market share by **value** produced by domestic manufacturers in the last year | RS |
| QN06 | Percentage of medical product market share by **volume** produced by domestic manufacturers in the last year | RS |
| QN07 | Total number of **medical products** with **valid** registration / marketing authorization | MA |
| QN08 | Total number of **medicines** with **valid** registration / marketing authorization | MA |
| QN09 | Total number of **vaccines** with **valid** registration / marketing authorization | MA |
| QN10 | Total number of **medical devices** with **valid** registration / marketing authorization / approvals | MA |
| QN11 | Total number of **blood, blood components and plasma derived products** with **valid** registration / marketing authorization | MA |
| QN12 | Number of **medical product** applications received for registration / marketing authorization over the last year | MA |
| QN13 | Number of applications received for **new medicines** in the last year | MA |
| QN14 | Number of applications received for **generic medicines** in the last year | MA |
| QN15 | Number of applications received for **vaccines** in the last year | MA |
| QN16 | Number of applications received for **medical devices** with **valid** registration / marketing authorization | MA |
| QN17 | Number of applications received for **blood, blood components and plasma derived products** with **valid** registration / marketing authorization | MA |
| QN18 | **Maximum** number of days for decision-making on **new medicine** applications (as per the related guidelines or regulations) | MA |
| QN19 | **Maximum** number of days for decision-making on **new generic medicine** applications (as per the related guidelines or regulations) | MA |
| QN20 | **Maximum** number of days for decision-making on **new vaccine** applications (as per the related guidelines or regulations) | MA |
| QN21 | Total number of **assessors** of medical products | MA |
| QN22 | Number of notifications of **adverse events** received in the last year (according to scope of benchmarking) | VL |
| QN23 | Number of notifications of **serious adverse events** received in the last year | VL |

| # | Indicator | Related function |
|---|---|---|
| QN24 | Number of **safety alerts** published and distributed in the last year | VL |
| QN25 | Number of specific **pharmacovigilance inspections** carried out in the last year | VL |
| QN26 | Number of **regulatory actions and administrative regulatory measures** carried out for reasons of drug safety in the last year (e.g. changes in over-the-counter vs prescription status, conditions of use, warnings or other safety-related changes in labelling, withdrawals of products or lots, cancellations of registration, fines, suspensions, or closures of establishments) | VL |
| QN27 | Number of **applications** received for the **import** of medical products in the last year | MC |
| QN28 | Number of batches **monitored** by the market **surveillance and control programme** in the last year | MC |
| QN29 | Number of **batches** of **substandard or falsified** medical products detected by the **market surveillance and control programme** in the last year | MC |
| QN30 | Number of **batches recalled by manufacturer** in the last year | MC |
| QN31 | Number of **medical products** for which advertisement and promotion **applications** were received in the last year | MC |
| QN32 | **Maximum** number of days to grant advertisement and promotion **authorization** (as per the related guidelines and regulations) | MC |
| QN33 | Total number of **medicine** manufacturing **facilities** with valid license | LI |
| QN34 | Total number of **active pharmaceutical ingredient** manufacturing **facilities** with valid license | LI |
| QN35 | Total number of **vaccine** manufacturing **facilities** with valid license | LI |
| QN36 | Total number of medical product **distributors** with valid license | LI |
| QN37 | Total number of medical product **wholesalers** and stores with valid license | LI |
| QN38 | Total number of **pharmacies** and medical product **outlets** with valid license | LI |
| QN39 | Number of **domestic Good Manufacturing Practice inspections** carried out in the last year | RI |
| QN40 | Number of **overseas Good Manufacturing Practice inspections** carried out in the last year | RI |
| QN41 | Number of **Good Distribution Practice inspections** carried out in the last year | RI |
| QN42 | Number of **Good Clinical Practice inspections** carried out in the last year | RI |
| QN43 | Number of **regulatory actions and administrative regulatory measures** carried out for reasons of medical product quality in the last year (e.g. restrictions of use, withdrawals of products or lots, cancellations of registration, fines, suspensions, or closures of establishments) | RI |
| QN44 | Total number of **full-time Good Manufacturing Practice inspectors** | RI |
| QN45 | Total number of **full-time Good Distribution Practice inspectors** | RI |
| QN46 | Total number of **full-time Good Clinical Practice inspectors** | RI |
| QN47 | Total number of **batches tested** by national control laboratory in the last year | LT |
| QN48 | Total number of **batches for which notices of non-conformity** (or similar documents) were issued in the last year | LT |
| QN49 | Total number of national control laboratory **staff** | LT |

| # | Indicator | Related function |
|---|---|---|
| QN50 | Total number of national control laboratory **analysts** | LT |
| QN51 | Number of **medicine** clinical trial **applications** received in the last year | CT |
| QN52 | Number of **vaccine** clinical trial **applications** received in the last year | CT |
| QN53 | Number of **medicine** clinical trial **authorizations** issued in the last year | CT |
| QN54 | Number of **ethics committees** authorized or accredited by the NRA or the corresponding national health authority | CT |
| QN55 | Maximum number of **days for decision-making** on clinical trial applications (as per the related guidelines and regulations) | CT |
| QN56 | Number of vaccine lots **released** in the last year | LR |

# Annex 6: Guidance on virtual benchmarking

## 1. Background

The goal of the World Health Organization's (WHO's) regulatory system strengthening work is to help ensure the availability of safe, effective and quality medical products, by assisting countries to reach and sustain a level of regulatory oversight that is effective, efficient and transparent.

In pursuit of this goal, WHO has established, implemented and refined a five-step model to strengthen regulatory systems. A series of activities are conducted for the benchmarking of national regulatory systems using the WHO Global Benchmarking Tool (GBT), with results used to formulate institutional development plans.

The COVID-19 public health emergency raised many limitations, including travel restrictions and the inability to conduct face-to-face meetings. To ensure continuous and timely support to regulatory systems, it was deemed necessary to use other available tools and resources.

All benchmarking activities could be conducted onsite, virtually or hybrid – that is, through a combination of virtual and onsite, with part of the team or certain functions onsite and other activities conducted virtually.

Although virtual benchmarking activities differ in administrative and logistic arrangements, it is expected that the virtual nature of the activity, being remotely conducted, is of no or minimal impact on the quality of the process and outcome.

## 2. Scope

This guidance applies to all virtual and hybrid activities related to the WHO benchmarking process. It describes different measures and aspects that will be considered when planning and conducting virtual benchmarking activities.

## 3. Planning a virtual benchmarking

- The decision to conduct all or some benchmarking activities virtually will be made by the three levels of WHO (headquarters, regional office and country office) in agreement with the country.
- All technological limitations for virtual benchmarking should be verified and agreed upon before further decisions are made, to ensure the interactive assessment is viable. Considerations include, but are not limited to:
  - internet connection and speed
  - time zone difference
  - virtual platform, including the use of different applications, livestream video, and screen-sharing of data and documents;
  - virtual interactions, including remote observation of premises for example national control laboratory; and
  - translation services (both spoken and written), if applicable.

- In any benchmarking activity, the team size and composition should reflect the purpose and scope of the visit, as well as the size and complexity of the regulatory system and targeted regulatory functions being assessed.
- The number of benchmarking team members assigned for each function, as well as their roles, responsibilities and workplan, should be conveyed to the Team Leader during the briefing preparatory meeting.
- The number of days and hours needed to benchmark each function, as well as the number of virtual meeting rooms needed for each function, should be agreed upon.
- Prior to benchmarking, it is recommended that each team member conduct a desk review of the completed computerized GBT, along with relevant documented evidence (for example, through the information-sharing platform), to ensure proper use of time during virtual benchmarking.

## 4. Conducting a virtual benchmarking

- Documents and other information requested during a virtual benchmarking should be provided within a reasonable timeframe – as with information requested during an onsite visit.
- Good time management should be upheld by both the benchmarking team and the national regulatory authority (NRA).
- If extra time is needed for a certain function, the benchmarking team member should inform the Team Leader and further arrangements should be made in agreement with the NRA.
- Ideally, a technical debriefing should be organised a day before the closeout meeting, to provide detailed feedback on observations and identified gaps. However, due to certain differences in the virtual benchmarking agenda and timeframe agreed with the NRA, this debriefing may be conducted after a certain number of functions have been benchmarked or on a weekly basis.

## 5. References


- FDA Guidance for Industry – Remote Interactive Evaluations of Drug Manufacturing and Bioresearch Monitoring Facilities During the COVID-19 Public Health Emergency – April 2021.

A Guide to the Virtual Meeting – Harvard Business Review

# Annex 7: Template for official request of benchmarking

Please use the letterhead of the relevant institution

To [WHO Representative in country name],

Subject: Request for WHO formal benchmarking of the medical products regulatory system in [country name]

In reference to World Health Assembly (WHA) resolution 67.20 on *Regulatory system strengthening for medical products;*

Recognizing that effective regulatory systems are an essential component of health system strengthening, contribute to better public health outcomes, and are necessary to the realization of universal health coverage and the achievement of the sustainable development goals;

Aware that the World Health Organization (WHO) Global Benchmarking Tool (GBT) represents the primary means by which WHO objectively evaluates regulatory systems, as mandated by resolution WHA 67.20 on *Regulatory system strengthening for medical products;*

Aware that the WHO GBT aims to identify the national regulatory system's strengths along with areas for improvement, and also assists with the formulation of an institutional development plan to build upon the identified strengths and address areas for improvement;

[Institution(s)] of [country name] would request WHO's support in strengthening the national regulatory system by conducting [formal benchmarking of the medicine/vaccine/blood products/medical devices regulatory system using the WHO GBT].

For further information or follow up on this request, please contact us at [email address and/or phone number].

We would greatly appreciate further confirmation to proceed with the relevant arrangements.

[Name, title and signature of the representative of the relevant institution(s)]

Regulation and Prequalification department
World Health Organization
20 Avenue Appia
1211 Geneva 27
Switzerland
https://www.who.int/teams/regulation-prequalification/

9789240087637