



ASSESSING COST-EFFECTIVENESS OF NON-TARIFF MEASURES – A TOOLKIT



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EXECUTIVE SUMMARY

Businesses have identified non-tariff measures such as non-automatic licensing, rules of origin, and regulatory measures as major elements affecting their ability to trade. Two broad categories of NTMs can be distinguished -

- **Technical measures**, including sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT), which are product-specific requirements, mostly designed for public policy objectives to protect health, safety and the environment, such as packaging requirements, maximum residual limits of chemicals, and related inspections and certification; and
- **Non-technical measures** a wide array of trade-related policies such as quotas, non-automatic import licensing, rules of origin and price control measures.

Of these two types, the incidence of technical measures is rising. Businesses must increasingly comply with numerous procedures and requirements when exporting and importing. Even when not targeting trade related objectives, such NTMs can alter the volume, direction, and product composition of international trade. Thus, the need to streamline NTMs for facilitating trade and reducing business costs has gained importance in recent years. However, their complexity has been an impediment to reform. It is crucial to strike a careful balance between the costs of NTMs and their regulatory social and environmental benefits.

The **Non-Tariff Measures Cost-Effectiveness Toolkit** is designed to provide policy makers a framework to find this balance, including some tools and templates. The toolkit is designed on three pillars – *Design, Implementation and Compliance*.

- The *Design* pillar evaluates how suitable the NTM has been/can be for meeting the stated objectives;
- *Implementation* assesses the efficacy of procedures and costs of implementing the NTM; and
- *Compliance* measures how burdensome the NTM is on the private sector.

The toolkit relies on active engagement with the stakeholders who have to comply with the NTMs and oversee its day to day implementation. The goal at all points is to streamline NTMs in order to achieve public policy objectives at the lowest possible cost.

The toolkit is written for reviewing NTMs applicable to a single intermediate input for a value chain/ sector of national economic and political interest but can be extended to several sectors. The toolkit targets increasing competitiveness and value addition in the identified sector as well as creation of regional value chains (RVCs). A brief summary of the underlying objectives of the toolkit, its rationale and procedures is provided here.

What are NTMs?

Non-tariff measures (NTMs) are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods by changing quantities traded, or prices or both (UNCTAD, 2019). Most NTMs are designed to achieve public policy objectives, such as food safety, consumer protection, or protection of the environment.

Why review NTMs?

NTMs can unduly increase the cost of doing business or simply fail to meet policy objectives. Poorly designed and inefficiently implemented NTMs create administrative and financial burden for the private sector and government agencies. This may negatively impact international trade and consumers in the form of higher product prices. It requires reviewing NTMs with the objective of minimizing compliance costs, improving design and making implementation processes more effective.

What is the rationale of the NTM cost-effectiveness toolkit?

The Toolkit provides a step by step implementation procedure and certain tools that can be used to review NTMs applicable to intermediate inputs within critical value chains. It is meant to enable users to review NTMs in terms of design implementation and compliance – the three main pillars of the toolkit. The end goal of the toolkit is to encourage good regulatory practices.

How does the toolkit approach NTM review?

The toolkit follows a **5-step approach** to reviewing NTMs. It begins with **value chain assessment** to identify imported intermediate inputs within a value chain of interest and mapping the applicable NTMs using the UNCTAD Trains Database. The next step is to **identify key stakeholders** i.e. government agencies responsible for designing and enforcing the NTMs under consideration; the regulated firms; as well as other relevant government agencies. This is followed by **engaging with the stakeholders** through surveys, focus group discussions, in-depth interviews and detailed compliance and implementation cost assessment. Interview and survey guidelines are provided to facilitate a comprehensive analysis of NTMs. The discussions with the stakeholders are then **synthesized and analyzed** to identify issues and challenges regarding compliance, design and implementation. Insights drawn may be substantive or procedural. The toolkit concludes with **generating policy options** to address the identified problems so as to drive an NTM reform agenda.

What “tools” does the toolkit provide?

In order to facilitate implementation, the toolkit provides tools to aid stakeholder engagement: a sample survey, in-depth interview guidelines, guidelines for focus group discussions, a detailed cost assessment spreadsheet, potential approaches for analyzing stakeholder input, and ways of generating suitable policy options. It also provides other resources for planning and delivering workshops and hiring the implementing staff.

How long does it take to implement the toolkit?

The toolkit envisages an average implementation period of six to twelve months. This will also depend on the number of products, number of NTMs, and the number of firms/agencies to be interviewed.

What are the expected end results?

The findings from the toolkit should enable users to generate policy options towards implementing well-designed NTMs that meet economic and non-economic policy objectives. Implementation of reforms itself is beyond the scope of this toolkit, as it will depend upon the country’s political decision. However, activities can be designed to accompany and facilitate the process, as an extension of the implementation of the toolkit.

Overall, the design of the toolkit is flexible, and users are free to adapt the implementation based on their needs, available time and budget, and political interests. In a nutshell, the toolkit provides a systematic approach and easy to use tools to review NTMs from multiple angles in a way that can highlight the efficacy and costs of each NTM.



1. INTRODUCTION

Non-tariff measures (NTMs) are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods by changing quantities traded, or prices or both. (UNCTAD, 2019)

While the use of tariffs as an instrument of trade policy has declined over the years, the role of NTMs has increasingly come into focus. NTMs can cover a broad range of measures including traditional trade policy instruments, such as quotas or price controls or technical regulatory measures such as sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT). In particular, the latter have become a critical determinant of market access in the last few decades. These may include requirements for traders to obtain a license or a permit; or testing, certification, and packaging requirements for imported or exported goods. The emergence of these measures can be attributed to non-trade, public policy objectives such as demand for high quality products or protection against hazards from food additives and contaminants, environmentally damaging products and fraudulent pharmaceuticals.

NTMs can affect trade, even when this is not their main objective. In practice, NTMs can increase price, thus impeding trade. This results in, often unintended, discrimination against foreign producers. Such NTMs, can hurt domestic producers, too, by making the import of intermediate inputs expensive, increasing business costs and reducing productivity, thus making a country uncompetitive in export markets. While all WTO member countries reserve the right to regulate trade, it is important for governments to be aware of the measures' implications on national growth and development. NTMs can prevent the creation of regional value chains (RVC), restricting an economy's ability to effectively make use of the region for boosting their competitiveness and producing/exporting higher value-added products (UNCTAD 2018). The increased cost of doing business arising from the need to comply with multiple import NTMs can restrict value addition and impair structural transformation of an economy. In a world where 70% of global trade involves global value chains (GVCs) and the emphasis on regional value chains (RVCs) is significant, particularly for the less developed and developing economies, addressing NTMs on intermediate imported inputs deserves much attention - not "as a *concession to trading partners, but as a domestic issue driven by a concern for enhanced competitiveness*" (World Bank, 2012).

While governments should not be looking to simply eliminate problematic NTMs, the need to strike a balance between the achievement of policy objectives and minimizing economic costs is critical. NTMs must be effective as well as efficient. This can be achieved by encouraging good regulatory practices in designing and implementing them, such that costs of compliance are minimized and desired policy goals are met.

This toolkit is designed to facilitate NTMs review based on a 5-step approach. This handbook provides a motivation and rationale for the toolkit; discusses the key pillars it focuses on for a holistic NTMs review and outlines a step-by-step implementation procedure for deployment. It also makes available to the user, certain "tools" to aid in the deployment process.

2. MOTIVATION, RATIONALE AND OBJECTIVE

It can be difficult to determine the overall impact of an NTM – positive or negative, as that would require a counterfactual on what would have happened if the NTM did not exist. Yet, it is possible to assess its effectiveness by understanding how the NTM was designed, is being implemented as well as challenges that private sector faces when complying with them.

A consideration of the following examples will throw light on the problem at hand:

- A national government imposed mandatory fumigation requirements on imported sugar to ensure that it was pest-free. While the objective was legitimate, this requirement was over and above those recommended by Codex Alimentarius, the international standard on food products. Further, the decision was not based on scientific assessment of the alternative procedures such as irradiation or other treatments which may have been more suitable, safer or environmentally friendly.
- An inspector responsible for physically inspecting imports lacks training on handling inspection samples and appropriate inspection methods. This results in long clearance time and the risk of sub-standard quality of cotton entering passing through the border may increase.
- A small-scale importer of fertilizers is unclear about the documentary requirements for import and has to spend considerable time and effort to liaise with the relevant government agencies.

The above are respectively cases where the NTM design is flawed, its implementation process is ineffective, and its compliance imposes cost and time burden on the private sector. An ill-designed and poorly implemented NTM will fail to meet the intended objective, creating a situation wherein costs could easily outweigh its benefits. NTM implementation itself can be an expensive process requiring significant investment in infrastructure, technology or even day to day administration. The costs incurred by government agencies in the NTM design and implementation process are ultimately passed on to the private sector in the form of import charges or certificate/license fees. This can make compliance with NTMs both financially and administratively burdensome for the private sector, increasing the overall cost of doing business, reducing competitiveness and negatively impacting the ability to participate in global or regional value chains. This holds particularly true for small and medium enterprises (SMEs).

In the face of this and the trade-off between policy objectives and trade effects that NTMs present, it is crucial that the NTMs in place be cost-effective. This toolkit proposes a process of thorough with the government agencies and the private sector to gauge the level of NTM effectiveness. The goal is to promote good regulatory practices. The resulting NTM reform or simplification in procedures can help strengthen regional value chains and boost export competitiveness.

More specifically, the key objectives of the toolkit can be broken down as follows:

- To assess the NTM **design** with a view of ascertaining if the NTM is required as well as to streamline the design process in a way that makes NTMs more effective and beneficial to the society at large.
- To assess the NTM **implementation** process with a view of making it more effective and efficient, such that costs on private and public sectors are kept minimal.
- To identify the challenges faced by private sector when ensuring **compliance** with NTMs with a view to assessing main costs and procedural obstacles.

The three main pillars of the NTM review process that the toolkit emphasizes are (i) design and (ii) implementation and (iii) compliance, summarized in Box 1.

Box 1. Key Pillars of NTMs Cost-Effectiveness Toolkit

NTM Design

The benefits of an NTM critically depend on the design process. For an NTM to successfully attain policy objectives relating to health, safety or security, the design process should start with clearly defining the problem to be addressed. Considering policy options, international standards, views of experts and stakeholders is essential to ensure that an NTM achieves its objective and is beneficial for all parts of society. It may be hard to quantify the benefits of an NTM but following good regulatory practices in the process of designing NTMs will go a long way in ensuring that benefits are achieved at the lowest possible economic cost.

NTM Implementation

A well-designed NTM may still fail to meet the desired goals if it is not enforced well. Implementation agencies need to have a clear understanding of what the NTM objectives are and then plan its implementation by allocating the necessary resources – financial, human and technological. An ill planned approach to implementation and lack of proper monitoring of implementation processes can become a source of frustration for businesses. Sometimes, the implementation itself can be an expensive process requiring significant investment in infrastructure, technology or even day to day administration. At all points, the objective must be to ensure that the requirement to comply with an NTM does not become an unnecessary burden on those regulated i.e. the private sector, but also to the enforcing agency.

NTM Compliance

Compliance with an NTM can be demanding on businesses – financially and procedurally. Businesses may be required to buy new equipment, introduce new production processes, hire and train additional staff, or pay a high fee for obtaining a license or permit prior to import. In addition, the administrative costs for making notifications, publishing information and record keeping can become an added source of pressure for the private sector. As such, the need to assess these compliance related challenges becomes critical to improving NTM design and implementation and to ultimately eliminate procedural obstacles and minimize costs.

To better address its objectives, NTM Cost-Effectiveness Toolkit is designed to analyze **NTMs applicable to “imported intermediate inputs” at 6-digit level of the Harmonized System nomenclature (HS6-digit)** that are relevant for a specific value chain of interest as these have important implications for market access, international competitiveness and **regional value chains**.

Note: Users may simultaneously assess the cost-effectiveness of export NTMs applicable to the final, exported HS6 product in question, following the same approach as the toolkit proposes for NTMs applicable to imported intermediate inputs. Often, export NTMs account for a non-trivial fraction of the total number of NTMs in place. The need to comply with these NTMs when exporting the final product can severely impact the cost of doing business and streamlining such NTMs can further boost export competitiveness within a value chain. However, when doing so, it is essential to distinguish between the exporters of the final product from the importers of intermediate input(s)– who may often be different. In such cases, a review of export NTMs alongside import NTMs will widen the scope of the toolkit substantially. Hence, the decision to review export NTMs should be based on a careful consideration of the sectoral context, budget and the overall feasibility.

3. DEPLOYMENT FRAMEWORK AND PROCEDURE

The toolkit is designed based on insights drawn from the OECD literature on Regulatory Impact Assessment, UNCTAD and World Bank literature on NTMs, ITC business surveys as well as other national government programs and academic literature. While the OECD guidelines address regulations more broadly, this toolkit adapts its underlying principles to specifically address regulations affecting trade i.e. NTMs. An overview of all the core dimensions on which the toolkit is built may be accessed in [Appendix IX Dimensions of Stakeholder Engagement](#).

The framework of the toolkit involves the following:

1. Identify a value chain in which the country seeks to strengthen competitiveness, select an imported intermediate input within this value chain, and ascertain all import NTMs that the input is subject to;
2. Identify relevant stakeholders i.e. the agencies responsible for designing and implementing the NTMs; as well as private sector firms and associations who are required to comply with them;
3. Engage with these stakeholders to understand challenges associated with NTM design, implementation, and compliance; based on a 4-tier stakeholder engagement process;
4. Synthesize and analyze stakeholder inputs to summarize key findings;
5. Generate policy options focused on addressing these findings through enhancing good regulatory practices.

While users may exercise flexibility in the deployment of this toolkit and adapt the main tools can be adapted based on country and sector contexts, the underlying principles on which the toolkit is based remains the same. The timelines for deployment will also depend on the resources at hand, sector and country contexts. Figure 1 and 2 provide an overview of the toolkit framework and a potential time frame for its deployment.



Figure 1
Step wise Approach to Toolkit Deployment and Key Outputs

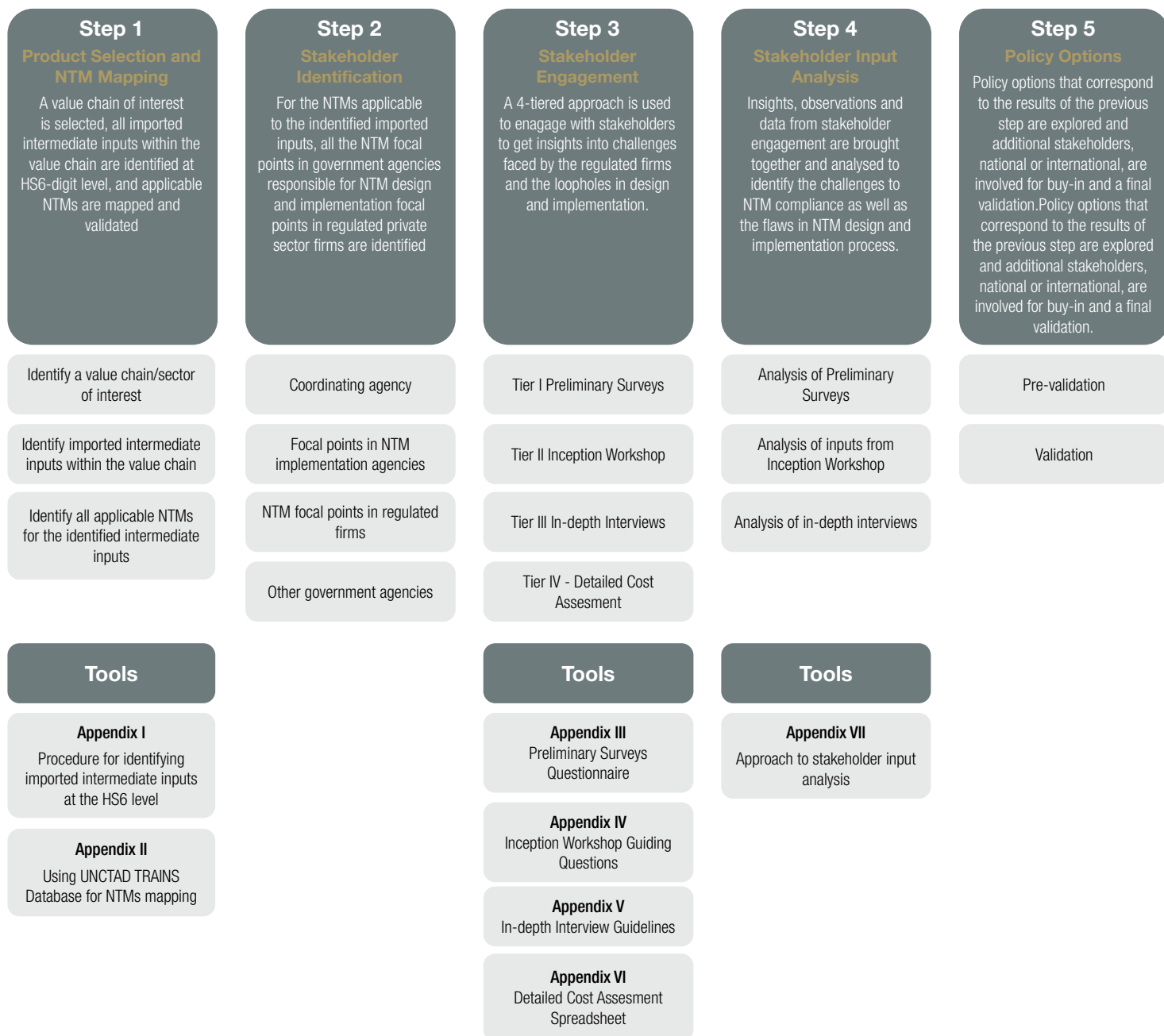


Figure 2

Proposed Timeline for Implementation

Main Activity/Month	1	2	3	4	5	6	7	8	9	10	11	12
Identification of a coordinating agency	█											
Value chain assessment	█	█										
Selection of intermediate input(s) of interest		█	█									
Validation of NTMs data			█									
Stakeholder identification				█								
Administration of tier I preliminary surveys			█	█								
Organization of tier II inception workshop					█							
Administration of tier III in-depth interviews and tier IV detailed cost-assessment					█	█						
Synthesis and analysis of findings							█	█				
Pre-validation of findings and securing policy-level buy in								█	█			
Preparation of final assessment report										█	█	
Validation												█

3.1. TOOLKIT **STEP 1** - INTERMEDIATE INPUT SELECTION AND NTM MAPPING

Selecting a value chain, an intermediate input(s) input and mapping the applicable NTMs is the starting point of implementation.

The recommended approach for this step is outlined below:

(i) Identify a value chain/sector of interest

Value chain selection must ensure that the NTM review process can ultimately drive competitiveness in a strategic sector. The following options may be used independently or in combination to accomplish this goal:

- The toolkit user may already have in mind a specific value chain for which it would like to review imported intermediate inputs NTMs.
- A desk review involving a quantitative and qualitative assessment of a few potential sectors from an economic and political standpoint.
- Joint consultations with stakeholders including government agencies, business associations and policy makers.

(ii) Identify imported intermediate inputs within the value chain

Perform a value chain analysis to identify the key intermediate inputs that are strategic to the selected value chain, their total import value, and their regional import value. The following methods may be used independently, or in combination:

- Consultations with exporters of the downstream product on the most important intermediate imports for the value chain

- Rigorous secondary research using government websites and documents, academic papers, websites of industry associations, publications of international organizations etc. to assess all intermediate inputs essential for a value chain.
- Consultations with relevant government departments with expertise on the value chain.
- Hiring a sectoral expert to identify the strategic intermediate inputs within a value chain. For example, a textiles engineer may help list out all inputs required for textiles production.

(iii) Identify all applicable NTMs for the identified intermediate inputs

Map the applicable NTMs to the inputs identified, using UNCTAD's TRAINS database which provides the list of all NTMs applicable on products at the HS6 digit level. Since NTMs are frequently updated, the identified NTMs must be validated with the help of a national ministry or department in charge of maintaining a database of national regulations.

From all the intermediate inputs identified, the next step is to shortlist the most critical ones, for which the NTMs will be reviewed. To ensure that the benefits of implementing the toolkit can justify the costs, the following three factors may be considered critical when selecting the inputs –

- The overall import value is significant
- The regional import value is significant
- The input is subject to multiple NTMs by multiple agencies

[Appendix I](#) provides a detailed step by step “*Procedure for Identifying Imported Intermediate Inputs*”, and [Appendix II](#) provides a stepwise approach to “*Using UNCTAD TRAINS Database for Mapping NTMs*”.¹

The user of the toolkit may choose to review NTMs associated with a single, or multiple intermediate inputs.

Note: Sometimes, the intermediate input identified in the value chain analysis may be generic in nature i.e. critical for several value chains. In such cases, the total import value cannot be used to determine the input to be selected. For instance, fertilizers may be imported for use in cocoa or cotton production. In such cases, consultations with either the private sector or relevant government departments such as the ministry of trade or agriculture, or the national cocoa or cotton board to estimate the value of the intermediate input imported solely for use in the value chain under consideration, are recommended.

3.2. TOOLKIT STEP 2 - STAKEHOLDER IDENTIFICATION

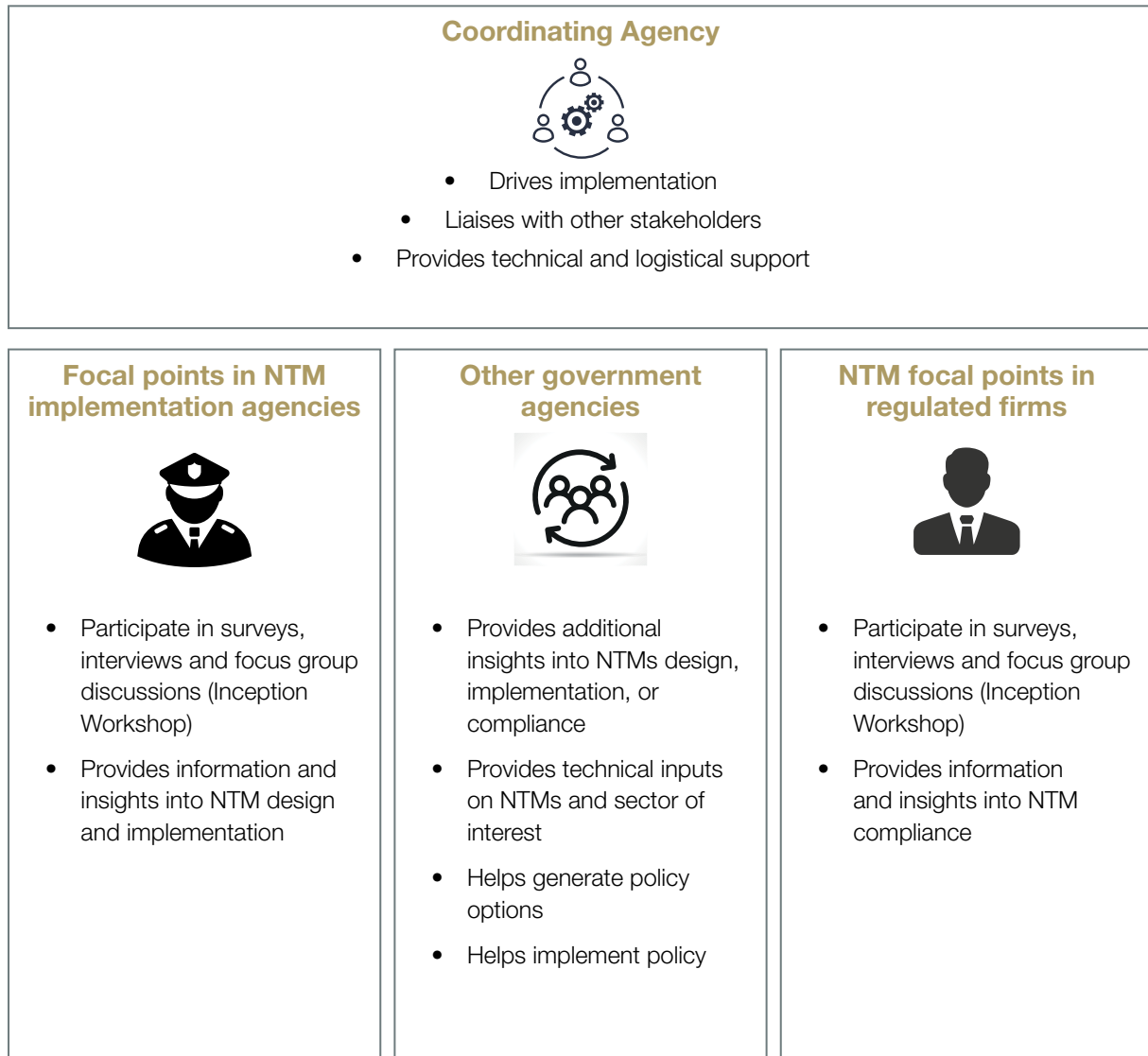
Once the intermediate input(s) of interest has (have) been identified, the next step is to map out a list of key stakeholders. A careful mapping of stakeholders is the foundation for the implementation of the toolkit. Stakeholder identification serves three objectives -

- Obtaining the necessary political support to drive the implementation of the toolkit
- Ensuring that views and opinions of all relevant parties are accounted for and the findings and insights are robust such that no important information is missed out.
- Bringing on board all key influencers who can and will positively push for reforms based on proposed policy options.

¹ This is only a suggested approach to assessing value chains to identify the key intermediate inputs. It is optional and users may adopt suitable alternate approaches where required.

Only a strong political commitment can ensure a result-oriented implementation that leads to the adoption of the policy options generated. Key stakeholders in implementation of the toolkit are indicated in Figure 3 and a more detailed overview is provided below.

Figure 3
Key Stakeholders



i. Coordinating agency

An agency that has the political mandate and is willing to drive the NTM review agenda will be ideal for coordinating the toolkit implementation. This agency will provide support at different stages of implementation process, such as selection of value chain and most relevant intermediate input(s). The coordinating agency will also facilitate exchange with and bring together the stakeholders into full participation in the process. This agency may also have a role in the implementation of policy recommendations.

For a coordinating agency, the following criteria may be relevant, but is not binding. What is of utmost importance is for the agency to be aligned with the goals of the toolkit. Indeed, a Ministry responsible for the regulation of the sector under analysis may also implement it with the objective of streamlining the NTMs it implements.

- a. **Impartiality**, such that it does not have a direct interest in the product under review. For instance, in New Zealand, the Treasury department is responsible for reviewing regulations.
- b. **Clear mandate and political support**, such that it is in a position to conciliate between relevant public authorities and proposing procedures for conducting the review or soliciting participation of the relevant public authorities and firms.
- c. **Technical competence**, such that it can provide a focal point for the purpose of implementation, i.e. someone with a knowledge and understanding of NTMs and international trade in general.

ii. Focal points in NTM implementation agencies

Government agencies responsible for design and implementation of the NTMs under review are critical stakeholders. For SPS and TBT measures, these would be the plant or animal health inspection services or quarantine departments, biosafety authorities or national standards bureau. Within each agency, it is necessary to identify a focal person who has knowledge about the various facets of NTM design and implementation. At the same time, it is essential to involve those who directly oversee the day to day implementation of the NTMs and have a direct contact with the private sector. Outreach by the coordinating agency will be useful in facilitating exchanges with such agencies and the focal points.

iii. NTM focal points in regulated firms

Importers of the identified intermediate inputs who use the inputs for further value addition are the other most critical stakeholders in this process.² Again, it will be necessary to have a focal point, who has a good understanding of the NTM procedures and costs, and its impact on their business operations. Here as well, the coordinating agency in the public sector must reach out the private sector and get them on board the toolkit.

Where the number of importers of the selected intermediate inputs is large, samples may be drawn. The sample size may be determined keeping in mind the budget, time constraints, and the target degree of precision needed. Several online tools are available for calculating an ideal sample size based on population, confidence interval and margin of error. However, a statistically significant sample size, while ideal is not necessary for implementation of the toolkit. Valuable insights can be drawn without having a rigid sample size. Listening to any firm can provide good perspective on the nature of challenges they face.

Where samples need to be drawn from a population comprising of a diverse set of firms, they must be representative to the extent possible. The sampling process should ensure diversity of firms in terms of size (by

² Where desirable and feasible, the users of the toolkit may also choose to engage with domestic producers of the HS6 intermediate input under consideration. This will help ascertain how domestic regulations and standards affect such producers. This information may then be used for drawing comparisons between how differently such measures affect importers and domestic producers. Another layer of analysis can be added to include those firms who purchase the intermediate inputs indirectly. Understanding their issues, purely from a price perspective can indicate how NTMs can indirectly affect even the firms who do not have to comply with them.

number of employees and/or turnover) and location. Different firms may face different challenges. Small and medium enterprises, for instance, may find it harder to allocate adequate resources to regulatory compliance. At the same time, cost of compliance may be different for firms located near ports vis-à-vis those farther away. As such, sampling process should account for these factors. Based on a study of several sampling techniques, Box 2 provides some guidance on what may or may not be appropriate in a given situation.

Box 2. Recommendations on Sampling Techniques

Quota sampling: This method would require dividing the entire population of firms into sub-groups based on location, size, scale of operations, total value of imports, etc. and then identifying the proportion of these sub-groups in the population. The same proportions are then applied in the sampling process. This non-random method allows for adequate representation in sample selection.

Cluster sampling: Similar to quota sampling, this technique requires dividing the entire population of firms into clusters based on a key criteria such as location, size and scale of operations, total value of imports, etc. and then randomly selecting an equal number of firms from each of this sub-group. This method is random, while allowing for some degree of representativeness.

Simple random sampling: This sampling method involves selecting firms at random. It allows every single firm an equal probability of being chosen to be a part of the sample. While it is time and resource efficient, this method will not allow for adequate representativeness in sample selection and can lead to skewed results. However, random sampling may be used if the population of firms is not diverse.

Convenience sampling: In this method, firms are selected based on how easy it is to get in touch with the respondents. Again, this method may not allow for adequate representation especially when the population of firms is diverse. However, the technique may be used when there are serious time and resource constraints.

iv. Other government agencies:

Other government agencies like the Ministry of Economic Planning or the Ministry of Law/Legal Affairs, who have no direct stake in the design or implementation of the NTMs in question, but have an interest in the intermediate input(s) or in trade and NTMs in general, can certainly add value to its implementation. This will depend on the sectoral context. For instance, a government department overseeing national exports could help encourage the toolkit adoption from an economic standpoint. A government division in charge of research and policy for the chosen sector or intermediate inputs can help validate intermediate inputs identified. Further, since the toolkits will conclude with a set of policy options based on findings, it may also be a good idea to involve policy makers who can provide inputs on the findings prior to final validation. Their involvement may help push for a high-level policy reform and buy-in from them can add value to the final validation.

3.3. TOOLKIT STEP 3 - STAKEHOLDER ENGAGEMENT

Once all stakeholders are identified, the next step is the process of engagement with them. The toolkit proposes a 4-tiered approach for this involving both one on one exchanges and focus group discussions. A brief description of all these tiers is explained in Box 3. Figure 5 indicates a stepwise approach to stakeholder engagement. **Further, a more detailed overview of each of these tiers, in terms of the rationale, supporting tool, and approach is also provided.** To begin with, this step process serves the following objectives:

- To align expectations and explore the feasibility and desirability of the toolkit and how it can be adapted to suit their needs and requirements
- To obtain insights and data into the various dimensions of NTM design, implementation, and compliance.

Figure 4

Dimensions of stakeholder engagement

Design

- Objectives
- Design and review process

Implementation

- Enforcement process and time
- Enforcement cost
- Enforcement strategy
- Transparency
- Stakeholder coordination
- Resource allocation
- Facilitating smooth compliance
- Effectiveness

Compliance

- Administrative formalities
- Time constraints
- Transparency
- Quality of enforcement staff
- Agency support
- Compliance costs
- Compliance benefits

[Appendix IX](#) “*Dimensions of Stakeholder Engagement*” comprises some broad points of focus during the stakeholder engagement process. They form the basis of all tiers of stakeholder engagement. The stakeholder engagement process seeks to study these dimensions.

Box 3. 4-Tier Approach to Stakeholder Engagement Process

Tier I Preliminary Survey - The preliminary survey ([Appendix III](#)) is a short questionnaire (10 minutes) to get a first level, big picture overview of NTM cost effectiveness from the implementation agencies as well as the regulated firms. The goal is two-fold – (i) to assess the extent to which a full-fledged NTM review is required, and (ii) to set a foundation for further engagement on assessing NTM cost-effectiveness by providing a preliminary insight into what is working and what is causing challenges.

Tier II Inception Workshop – While all other tiers involve one on one engagement with each agency or firm, this is the one that brings all stakeholders together. The inception workshop will explain the project goals, needs and methodology to the stakeholders. This will be a platform to start a dialogue where agencies and firms can discuss issues or concerns with each other. Moderated by someone with experience on procedural and technical aspects of NTMs, the inception workshop will also provide a bird's eye view of loopholes in NTM design and implementation and help adapt the next step in the stakeholder engagement process, i.e. in-depth interviews. Guiding questions for inception workshop are provided in [Appendix IV](#).

Tier III In-depth Interviews - The in-depth one-on-one interviews ([Appendix V](#)) are the most critical component of the 4-tiered approach comprising of detailed, open-ended questions. The goal is to get a thorough insight into the three pillars of the toolkit, through semi-structured interviews. The synthesis and analysis of these findings would complement insights from previous two tiers and help generate meaningful policy options. While the interviews will seek to establish if the NTMs impose a high cost burden on the firms or government agencies, quantification is not necessary at this stage.

Tier IV Detailed Cost Assessment - Where the firms and government agencies are able to quantify costs of compliance and implementation, the interviewer will proceed to fill the detailed cost assessment spreadsheet ([Appendix VI](#)). This will allow for quantification strengthen the analysis and policy recommendations. Execution of this step is not mandatory and will depend on the country and sector context as well as the nature and size of the firms being interviewed. However, it is critical to note that quantifying costs will help bolster an argument in favor of, or against any given policy recommendation, adding more dimension to the issues identified.

i. Tier 1 Preliminary Surveys

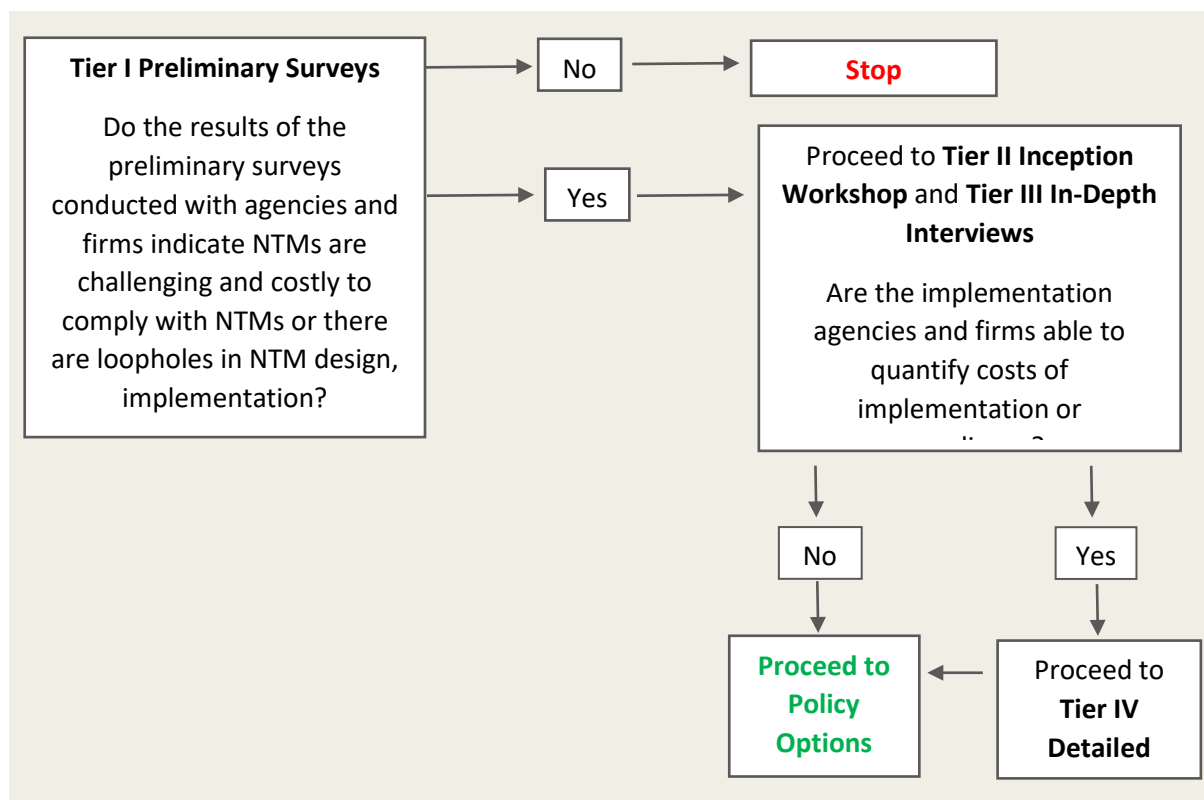
For the **firm level survey**, the main objectives are to ascertain whether and to what extent do the NTMs impose a cost burden, the level of satisfaction with the NTM implementation, the level of understanding of NTM objectives by the firms as well as NTM benefits for firms.

For **agency level surveys**, the surveys seek to ascertain the level of clarity on measure objectives among the implementation agency, whether the NTM and its impact is reviewed regularly, perceived benefits of the NTM and the costs of NTM implementation.

[Appendix III](#) “*Stakeholder Engagement Tier I – Preliminary Survey*” provides sample surveys for firms as well as agencies.

The surveys must be administered with the person in charge of day-to-day NTM compliance (in case of firms) or implementation (in case of agencies).

Figure 5
Implementing 4-Tier Stakeholder Engagement



ii. Tier II Inception workshop

The workshop seeks to align expectations and explore the feasibility and desirability of the toolkit and to understand stakeholders' assessment of the NTMs under consideration. Most importantly, it will be a platform to start a dialogue on the need to improve NTM design and implementation and to simplify compliance, by bringing together all the key stakeholders identified so far.

In specific, the inception workshop should serve to fulfil 5 broad objectives.

- i. **To provide a general overview of NTMs and their relevance**, while discussing the costs and benefits associated with them, as well as their impact on export competitiveness.
- ii. **To present overall project objectives, methodology and workplan** with the aim of seeking stakeholder buy in. The workshop is designed to discover a point of consensus or shared motivation to ensure investment in a meaningful outcome. It provides a platform to secure political support and commitment of all present stakeholders.
- iii. **To discuss findings of the tier 1 preliminary surveys and the objectives of the tier 3 in depth interviews.**
- iv. **To start a dialogue on the NTMs under consideration** through an interactive session that provides government agencies an opportunity to discuss the NTM design and implementation processes, and the firms to talk about compliance related challenges, thereby entering a constructive discussion.
- v. **To facilitate further development and adaptation of the toolkit** by greater knowledge sharing at the workshop and garnering stakeholder inputs and suggestions.

[Appendix IV](#) “Tier II - Inception Workshop Guiding Questions” provides a list of questions to facilitate the interactive session. The interactive session should take the form of focus group discussions, led by a skilled moderator and not exceed 60-90 minutes to make it productive without losing out the opportunity to fully explore the topic. The moderator should allow the discussion to take the turn that the stakeholders desire and allow for response patterns to develop, even though a good starting point would be the insights drawn from the tier I preliminary surveys.

iii. Tier III In-Depth Interviews

As a core component of the NTM cost effectiveness toolkit, the in-depth interviews are designed to serve the following objectives -

- i. The **firm-level interviews** aim to get an insight into NTM compliance related challenges covering compliance costs and procedural obstacles.
- ii. The **agency level interviews** seek to evaluate NTM design and implementation. Evaluating the design process helps establish whether government agencies can provide sufficient evidence that a given NTM is in fact the best way of achieving the desired policy objectives and that the design process has accounted for the same. Evaluating implementation process helps identify the operational barriers to the NTM achieving its objectives and correcting them to facilitate smooth compliance.

[Appendix V](#) “Stakeholder Engagement Tier III – In-Depth Interview Guidelines (Firm and Agency Level)” provides guidelines for the interview.

The interviews are designed to be semi-structured i.e. they use an interview protocol to help guide the interviewer to obtain all necessary information during the interview process. The structure enables the interviewer to obtain information systematically while allowing an opportunity to probe the participant for additional details. As such, it offers a great deal of flexibility for the interviewer. While the interviewer may choose to record the interviews, making notes is highly recommended as this will help capture most important points first-hand and simplify the analysis. The notes can be transcribed to make them more systematic.

These interviews are meant to be rigorous and can thus be time consuming – anticipate about 1-2 hours for an interview. Broadly speaking, the idea should be to build a story surrounding the three pillars of the toolkit. It is important to highlight that the responses to interviews will remain anonymous.

Note 1: Often, focus group discussions may be more feasible given the intensity and extent of issues to be discussed. Toolkit users can then base these discussions on the provided interview guidelines. However, one-on-one interviews have an added advantage of allowing respondents to express themselves more freely and talk about issues in detail, and at ease. If desirable, the users of the toolkit may choose one over the other based on sample size, available resources and time, sectoral and national contexts, and policy interests. Where the user chooses both, the focus group discussions and one-on-one interviews should be implemented in a manner that they complement each other.

Note 2: The interviewer must study all NTMs in detail prior to the interview and keep them in mind during the interview process.. This will enable him/her to probe further and immediately map the issue raised to the relevant NTM. The interview guidelines account for this.

iv. Tier IV Detailed Cost Assessment

Where respondents can quantify costs of compliance and implementation, the interviewer could proceed with a detailed cost assessment. Quantification of costs is an additional, yet important dimension of understanding the problems faced by firms and agencies. Such an assessment will complement and supplement the findings of the interviews with quantitative data helping bolster the argument in favor of proposed policy options. It will

strengthen the overall quality of policy options and provide the support needed to obtain buy in for effecting any action.

While these costs are touched upon in tier 3 in-depth interviews, the interview itself does not require respondents to quantify the costs, but simply to discuss if and to what extent NTMs impose a cost burden.

[Appendix VI](#) “*Stakeholder Engagement Tier IV Detailed Cost Assessment*” provides a template for the NTM compliance (Tab 1) and implementation costs (Tab II) spreadsheet. This spreadsheet focuses on the “compliance” and “implementation” pillar of the toolkit and is intended to serve the following objectives -

- i. The **firm level** spreadsheet focuses on identifying 3 categories of compliance costs – (i) fee/charges payable to agencies, (ii) one-time/fixed costs and (iii) recurring costs of compliance, and its various sub-components.
- ii. The **agency level** spreadsheet assesses two categories of implementation costs – (i) one-time/fixed costs, and (ii) recurring costs.

The implementation of this tier is facilitated by an easy to fill spreadsheet. It is designed...

- i. to allow for flexibility to either provide the aggregate total costs incurred where available or provide other information that can help calculate it, for instance, wage rate of employee performing a compliance related task and the number of hours worked. Further, the respondent also has the flexibility to provide wage rate in hourly, weekly or monthly format. The wage rate itself may be provided based on recalling the designation of the employee performing the task. This helps compute the total costs incurred in complying with the NTMs. The spreadsheet is best filled by an accountant or finance department personnel.
- ii. to make it convenient to fill. It does not require respondents to dissect specific cost categories associated with each NTMs. It rather gives an opportunity to provide cost data in broad terms which can later be used to map to the individual NTMs.

As in case of in-depth interviews, the interviewer must be able to map the cost figures to the relevant NTM. If it is not possible to provide precise monetary value for the cost, an approximate order of magnitude could also be useful.

3.4. TOOLKIT STEP 4 – STAKEHOLDER INPUT ANALYSIS

Once relevant information and insights from the surveys, inception workshop and interviews are obtained and data is collected, the next step is to synthesize and analyze it. The analysis should allow for identification of challenges with respect to the 3 key pillars of the NTMs being reviewed. Accurate identification of problems is essential to generating suitable policy options.

[Appendix VII](#) “*Approach to Stakeholder Input Analysis*” provides a checklist matrix based on the interview, as well as some examples of coding.

This section provides some potential options for analyzing the information and data collected across the 4 tiers of the stakeholder engagement process.

i. Analysis of Preliminary Surveys

The analysis of the preliminary survey data may be done in the following manner -

- a. For **firm level surveys**, descriptive statistics could be prepared. The use of survey tools can simplify this process by enabling the user to extract a summary of the data and generate graphs showing cross tabulations, frequency, mean, median or variance. This helps understand data in a more systematic and a meaningful way and can help understand patterns.

- b. For **agency-level surveys**, the process may be simpler. Since different agencies surveyed may be responsible for a different set of NTMs, the responses to each survey will have to be viewed independently. As such, descriptive statistics are not necessary. Responses to each survey will thus be viewed as a means of drawing preliminary insights and adapting the interviews accordingly.

ii. Analysis of inputs from Inception Workshop

When transcribed, the discussions from the inception workshop may be summarized and analyzed with the following in mind

- How group members collaborate on some issue, how they achieve consensus (or fail to), and how they construct shared meanings
- The time spent on discussing each issue. This provides clues to how much the participants care about an issue
- The intensity of expression
- Issues that may have higher impact on the economy

Based on this, a classification or a code for main topics and issues raised should be developed.

iii. Analysis of in-depth interviews

Analysis of the in-depth interviews looks to dissect the 3 pillars of the toolkit. It can be done based on the following 4 steps in the order they are mentioned. However, this is only an example approach. The inputs of the stakeholders may be analyzed in several different ways.

a. Checklist Matrix

Based on information and insights received from the interviews, the interviewer may start organizing the information using a simple checklist matrix.

[Appendix VII](#) provides a “*checklist matrix*” that can be used as a starting point for scoring each interview. It comprises simple yes-no answer type questions that can help systematically organize insights and information from the interviews. Scores for each interview can then be compiled to understand the bigger picture.

b. Grouping of Responses and Descriptive Analysis

Once information is more systematically organized using the checklist matrix, the next step may be to identify common themes running across the responses. This would involve selecting issues most commonly raised by maximum number of respondents such as – what is the most burdensome border procedure as highlighted by the firms; which documentary procedures are indicated as being most cumbersome by majority of the firms; etc. The most commonly highlighted issues and concerns can then be listed alongside the statistics. Thereafter, a descriptive analysis may be provided for each listed issue to highlight the specific details of the information received directly from the firms.

[Appendix VII](#) provides an example of this.

To systematize the data, nuance the findings and organize thoughts, mind-maps may be drawn using software like MindView and Mindmeister.

c. NTMs Mapping

Once the coding and descriptive analysis is prepared and issues and challenges are identified, they must be mapped to the corresponding NTMs. While the mapping is usually very clear in the agency-level interviews

(design and implementation pillars), information from company-level interviews (compliance pillar) needs to be disentangled to assess the challenges of each NTM independently. The descriptive analysis produced in the “Data Coding” step will facilitate this. Further, the interview guidelines ([Appendix V](#)) are designed in a way to encourage the respondents to point out the specific agency/requirement or procedure where the issue is most pronounced, making it easy to map NTMs.

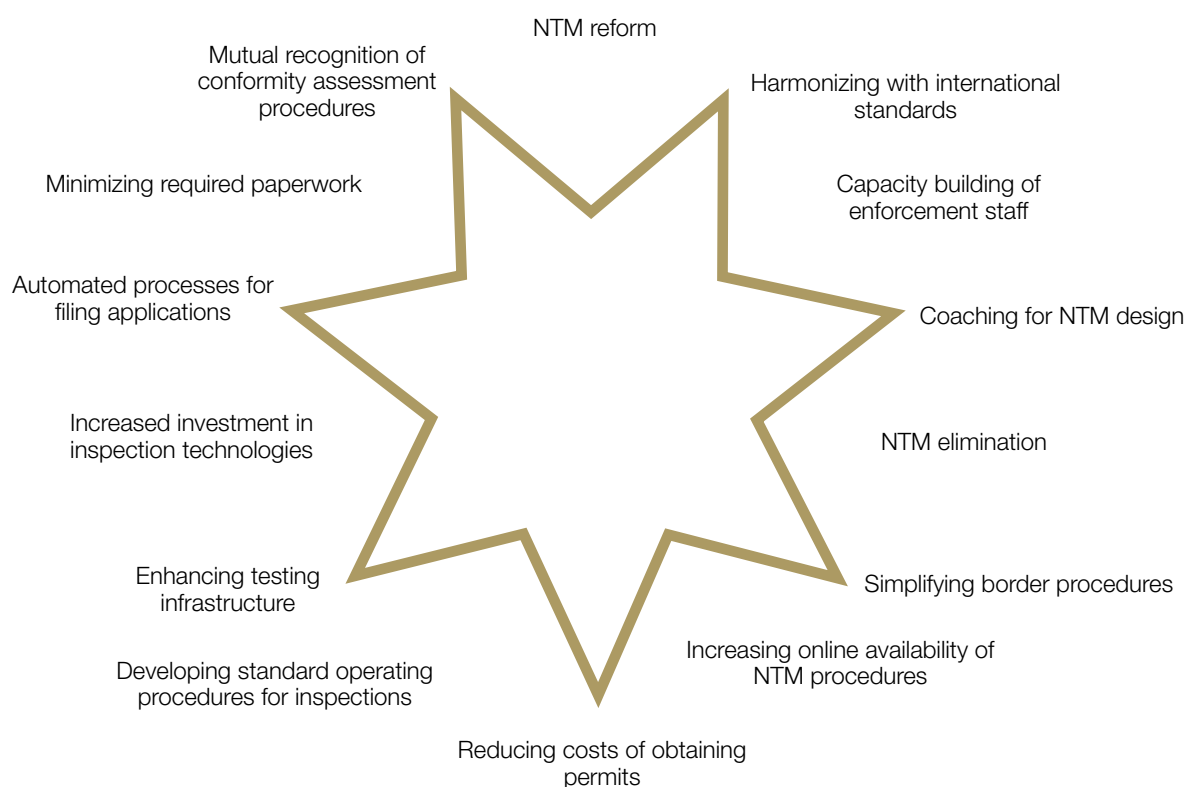
For analyzing the agency level interviews, no aggregation or descriptive analysis may be required because each agency has a separate mandate and designs/implements different NTMs. As such, the responses can be analyzed as based on a checklist matrix for each agency and preparing a descriptive analysis.

3.5. TOOLKIT STEP 5 - POLICY OPTIONS

This step allows for the generation of policy options based on the key findings from stakeholder engagement and input analysis. These should aim at encouraging good regulatory practices in NTM design, implementation, and compliance. Figure 6 presents a menu of potential policy options addressing NTMs. While these can provide a direction towards generating policy options, the overall goal of tailoring these options to specific issues raised, targeting individual NTMs, should be the key.

Figure 6

A universe of potential policy options



Policy options can be generated using the following approaches:

i. International best practices or international standards

The use of international comparisons and international case studies can help scan the horizons for interesting approaches to a problem, provide valuable guidance on practical scenarios and whether something has worked or not. Awareness of current practices and developments in other countries can help incorporate comparative information and evidence. The OECD and the World Bank have several such case studies on good regulatory practices in developing and developed countries. Another approach could be to refer to national government websites. It is also necessary here to view international standards by the International Plant Protection Organization (IPPC), the World Organization for Animal Health (OIE), the Codex Alimentarius or the International Standards Organization (ISO).

ii. Incorporating regional perspectives

Incorporating regional perspectives may provide insights into what could be the suitable option to address the problem at hand. For instance, if the issue of lack of cooperation between cross border agencies comes to light, then a potential idea would be to meet with regional agencies and get their perspective on this. Likewise, regional harmonization of standards and regulations is always a good strategy to simplify conformity assessment processes for regionally traded goods.

iii. Consultations with relevant experts

Generating policy options must also involve cultivating networks of contacts at a senior policy level, nationally, and in relevant international organizations and the academic research community, as well as local universities. This provides a more technical perspective on the problem at hand. Environmental experts, experts in food safety and plant protection, etc. in the academic community as well as in international organizations can be reached out to. Likewise, senior policy makers in agricultural or trade ministries may be engaged with.

iv. Review of existing research

A study of existing research on the common themes generated during stakeholder engagement can also help generate some policy options. Trainings and research conducted by international organizations in other countries, academic research, national governments or NGOs can be a good starting point to generating policy options. For instance, UNCTAD offers documentation on trade facilitation and lowering cost in NTMs through regional integration, the World Economic Forum provides guidance on simplifying border procedures, and the OECD literature provides literature on designing effective regulations.

i. Pre-validation

Once the analysis is complete and potential policy options generated, a report of findings and proposed options must be shared with all stakeholders with the following key objectives in mind -

- a. **To conduct a second-round of discussions** – Follow up on previous respondents to discuss the main findings to ensure that nothing is mis-reported. It also provides an opportunity to clarify/obtain additional information. This step will cover up nuances in understanding and help triangulate results better.
 - b. **To reach out to new or previously missed stakeholders** – If any stakeholders were previously missed or unavailable, this would be a good time to get in touch with them and incorporate additional information and insights to complement the findings.
 - c. **To secure senior policy level buy-in** – Discuss findings and policy options with policy makers at a senior level to strengthen policy proposals and plan an implementation strategy in terms of what can and cannot be done, and what the specific next steps should be. This will pave way for the next phase where the recommendations from the toolkit are put into implementation.
-

ii. Validation

The final report should then be shared during a validation workshop whereby all stakeholders come together to finally comment on the report as well as brainstorm and agree on the way ahead. Potential international partner organizations who could support implementing the policy options may be also be invited.

4. CONCLUSION

The non-tariff measures cost-effectiveness toolkit has been developed as a part of an effort to review NTMs for their design, implementation and compliance, and to provide a platform for the various stakeholders to express and share their views and opinions on the same. It is an exercise that seeks to highlight the relevance of good regulatory practices to facilitate trade, boost competitiveness and encourage regional integration. The implementation of the toolkit will bring as an output, detailed policy recommendations that are based on stakeholder input analysis. The objective of putting forth these recommendations is to encourage reform associated with NTM design, implementation or compliance. The reform process itself however is not included in the toolkit. Nonetheless, a preliminary step in this direction would be to prepare a “strategy” for implementation of these recommendations, specifying in precise and concrete terms what needs to be done, how this could be done, what the overall benefit would be, who would be the key national and international partner institutions and what exactly to do next. The reform will ultimately depend on the country’s political decision and the proactiveness of the agencies concerned. This can also be considered an extension of the implementing project and ad-hoc activities can be designed to accompany and facilitate the process.

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APPENDIX

Appendix I

Procedure for Identifying Imported Intermediate Inputs

This appendix summarizes the procedure to identify intermediate imports of strategic importance for a country, as defined at the harmonized system at 6 digits (HS6), to be used to measure the cost-effectiveness of applicable non-tariff measures. To provide context, we refer to a study done in Ghana where possible.

STEP 1: IDENTIFY MAJOR HS6 EXPORTS PRODUCTS WITH A DOMESTIC VALUE CHAIN

Our goal is to identify 3-4 value chains which are most relevant for the country from an export perspective. To start with, we use UN COMTRADE export data at the HS6 level to identify the major export products for the country concerned. To this end, we rank all HS6 export products based on their export value, from highest to lowest. We then focus on all high value HS6 exports with the aim of zeroing in on a value chain.

For an example, if we spot HS6 Products *610413 Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted – made of synthetic fibres; 610910 T-shirts, singlets and other vests, knitted or crocheted, of cotton; 611011 Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted of wool; 611120 Babies' garments and clothing accessories, knitted or crocheted;* amongst the top most exported goods, then the textiles and apparel value chain would likely be an important value chain.

The HS6 products could be raw materials, intermediate inputs or final consumer goods. Where the high export value product is a raw material, one may have to ascertain whether a high value-added product from the same value chain also belongs to the country's export basket. For an example, figure 1 shows the top 12 exported HS6 products for Ghana between 2014-2016. HS6 product *180100 – Cocoa Beans* is the product with the highest export value that is likely to form a value chain with even high value-added HS6 products i.e. *180310, 180400* and *180500* belonging to Ghana's export basket. This is relevant since promoting value addition is an important element of toolkit deployment. The [World Integrated Trade Solution \(WITS\)](#) provides a classification of product groups at the HS6 digit level based on "stages of processing".

Figure 1

Ghanaian exports, average between 2014-2016

HS6 Product Code	HS6 Product Name	Export Value (USD Million)	HS2 Product Classification	HS4 Product Classification
710812	Gold-- Other unwrought forms	5.713	Natural or cultured pearls, precious or semi-precious	Gold
710813	Gold-- Other semi-manufactured forms	3.716	Natural or cultured pearls, precious or semi-precious	Gold
180100	Cocoa beansCocoa beans, whole or broken, raw or roasted.	2.227	Cocoa and cocoa preparations	Cocoa beans
270900	Petroleum oilsPetroleum oils and oils obtained from bituminous minerals, crude.	1.220	Mineral fuels, mineral oils and products of their distillation	Petroleum oils
80131	Coconuts-- In shell	590	Edible fruit and nuts; peel of citrus fruit or melon	Coconuts
180310	Cocoa paste--Not defatted	371	Cocoa and cocoa preparations	Cocoa paste
180400	Cocoa butterCocoa butter, fat and oil.	211	Cocoa and cocoa preparations	Cocoa butter
160414	Prepared-- Tunas, skipjack and bonito (Sarda spp.)	165	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	Prepared
260200	Manganese oresManganese ores and concentrates, including ferruginous manganese ores	150	Ores, slag and ash	Manganese ores
440399	Wood in the rough-- Other	884	Wood and articles of wood; wood charcoal	Wood in the rough
760110	Unwrought aluminium-Aluminium, not alloyed	849	Aluminium and articles thereof	Unwrought aluminium
180500	Cocoa powderCocoa powder, not containing added sugar or other sweetening matter	803	Cocoa and cocoa preparations	Cocoa powder

Note that we did not select HS6 product 710812 – *Gold* or 80131 – *Coconuts* since our desk research indicated that neither undergoes extensive processing in Ghana.

STEP 2 ACCOUNT FOR NATIONAL AND INTERNATIONAL INDUSTRY FACTORS

To generate domestic buy-in in the country concerned, we evaluate the identified value chains against a series of other factors – in addition to its export importance. We consider the following factors for each value chain:

Nationally:

- (i) Share in total exports
- (ii) Key export destination markets
- (iii) Contribution to GDP
- (iv) Contribution to employment (with a gender perspective)
- (v) Contribution to export earnings
- (vi) Production trends
- (vii) Value chain growth rate
- (viii) Value chain policy initiatives
- (ix) Other factors, if relevant

Internationally:

- (i) The country's share in global exports
- (ii) Past and projected global growth rates of value chain
- (iii) Largest global exporters
- (iv) Basis of competition: price-based, quantity-based, product differentiation etc. (qualitative information)

STEP 3 IDENTIFY KEY VALUE CHAINS STAGES FOR THE COUNTRY

Once we determine the most important value chains in a country, we identify the stages in each value chain. This will provide us an idea of all the steps required to convert the raw material into the processed final export product. A useful source to this end is the value chain analysis done by the international organizations. For instance, Food and Agriculture Organization (FAO) and the World Bank have published various country-specific value chains. Another useful source is the Duke University – Global Value Chains Centre which conducts industry centric research on global value chains. Next, we identify the stages of the value chain in which the concerned country has capabilities. Together, both information will help us identify key intermediate imports for each value chain. A part of this was already done in the Step (1) when before selecting a product, we checked if a value chain is important enough for the country. However, while in the Step (1), our attempt was to clean data based on the product HS codes, in this step, we define value chains stages and allocate the chosen products to various stages in a value chain.

STEP 4 IDENTIFY INTERMEDIATE IMPORTS AT HS6 USED IN THE SELECTED VALUE CHAINS

Next, we analyze each value chain in terms of the following –

- (i) **Intermediate inputs used:** We prepare a list of all intermediate inputs that are strategic to each identified value chain. To this end, we draw from desk research, referring to government websites and documents, academic papers, websites of industry associations, publications of international organizations etc. While there is no such repository of value chain analysis, organizations like the World Bank and FAO often analyze relevant value chains for many countries which be useful for the purpose of identifying intermediate inputs. Again, the studies identified in Step (3) are useful examples. For instance, cocoa production requires fertilizers, processing of fish requires a specific kind of machinery and sawing of wood requires specific tools. Attribution is a key factor to bear in mind when evaluating the importance of a particular input. This entails assessing the proportion of the identified intermediate input imported for use in the value chain under consideration, as a given input may be used in several value chains.
- (ii) **Key stakeholders:** We then identify all the stakeholders involved in each value chain: farmers, associations of traders, businesses, involved government agencies etc. This will require a careful study of government websites and documents, academic papers, websites of industry associations, publications of international organizations etc.. The rationale for identifying the key stakeholders as follows - (i) to validate our research and analysis of the value chain with them and (ii) to involve them at the various stages of the project so as to enable increased awareness and understanding of NTMs among them and help achieve their cooperation in fleshing out the way forward in addressing the NTMs.

STEP 5 IDENTIFY KEY IMPORTED INPUTS AT HS6 LEVEL

We see if the country imports any of the inputs identified in Step (4) using UN COMTRADE import value data at HS6 level and identify the import value and share for each of these inputs. We make sure to bear in mind the following -

- (i) Import share: If the imported HS6 product accounts only for a very low share in total imports, we may ignore this input.
- (ii) Attribution: A specific imported HS6 product may be attributed to the value addition of various HS6 exports.

Figure 2

Fertilizer Imports, Ghana – 2016

HS6 Code	HS6 Product Name	Import Value (US\$ Million)	HS2 Sector	HS4 Sub Sector
310520	Mineral-Mineral or chemical fertilisers containing the three fertilizing agents Nitrogen, Phosphorus and Potassium	68.59	Fertilisers	Mineral

In Figure 3, for an example, HS6 Product 310520 *Mineral or chemical fertilizers containing the three fertilizing elements nitrogen, phosphorus and potassium* is a key input in cocoa production. However, this does not imply that all imports quantities of this fertilizer are used for cocoa production. In fact, the same fertilizer may be used for other products as well. Since it will not be possible to evaluate how much of these imports are attributed to the selected imported HS6 product through desk research, we anyway include this in the list, for further consideration when in contact with stakeholders. Figure 4 summarizes the key intermediate HS6 inputs for cocoa production on Ghana.

Figure 3

Key Intermediate Inputs for Cocoa Production in Ghana

HS6 Code	HS 6 Product (Imports)	HS4 Sub-Sector	Import Value in 2016 (US\$ Million)	Share of total imports
380893	Insecticides-- Herbicides, anti-sprouting products and plant-growth regulators	Insecticides	80.61	0.6%
310520	Mineral or chemical fertilisers containing the three fertilising elements nitrogen, phosphorus and potassium	Mineral	68.59	0.51%
380891	Insecticides-- Insecticides	Insecticides	46.60	0.34%
380892	Insecticides-- Fungicides	Insecticides	13.62	0.10%
380899	Insecticides-Other	Insecticides	3.43	0.02%
380894	Insecticides—Disinfectants	Insecticides	1.50	0.01%

STEP 6 IDENTIFY NTMs ASSOCIATED WITH IMPORTED HS6 INPUTS

For each of these imported HS6 inputs, we check if the country imposes any NTMs. To this end, we rely on UNCTAD's TRAINS database (see [Appendix II](#)). We identify the number of NTMs applied to imported HS6 inputs, respective NTM codes, the measure description for each NTM and the issuing agency for each NTM. We also make note of any NTMs which are horizontal in nature, i.e. applicable to all products for the country concerned, since it may be more difficult to phase these out, as compared to other product specific NTMs.

Note: There may be instances where the analysis of a certain value chain does not yield useful results. This may be because not many of the intermediate HS6 inputs are imported or not many NTMs are imposed on the imported intermediate HS6 input. In such cases, it is important to continue to identify more value chains, provided they fulfill all necessary criteria as defined in Step 1 and 2.

STEP 7 PREPARE THE FINAL SUMMARY

Finally, we synthesize the information for each value chain, structuring it as follows: (i) a brief context (based on research under Step 2), (ii) Export Statistics (based on research under Step 1 and Step 3) (iii) Intermediate Inputs and Applicable NTMs (based on research under Step 4(i), 5 and 6) and (iv) Key Stakeholders (based on research under Step 4(ii)).

Appendix II

Using UNCTAD TRAINS Database for NTM Mapping

This appendix seeks to assist users to map NTMs on the identified intermediate inputs using the UNCTAD TRAINS Database

The web portal TRAINS is an application for retrieval of UNCTAD NTMs TRAINS data, and a data analysis tool for integrated analysis. The TRAINS application allows users to display NTMs data by measures, affected products, countries applying the measures and trading partners affected. A detailed query can also be performed based on a user’s defined criteria. The application is publicly available at <http://trains.unctad.org/>. The landing welcome page is shown in Figure 1.

In specific, the quick search feature allows getting data easily and quickly for one destination market, exporting economy and one product or product group.

Figure 1
Snapshot of Web Application TRAINS Landing Page





The following steps can help users of the toolkit to map NTMs applied to the identified intermediate input -

- In the “Home” tab (Figure 1), select the following from the dropdown menu

- a. **Country imposing** - This is the source country i.e. country applying the NTM - in this case, the country where the toolkit is being deployed
 - b. **Partner affected** - This is the country to which the NTM is applied. For the purpose of the toolkit, this option may be left blank. Leaving this option blank will yield all NTMs applied to all countries
 - c. **Product affected** – This is the HS6 digit intermediate input for which NTMs need to be identified
- Once all options have been specified, click the “Search” button to display a summary overview of the applied NTMs (Figure 2)

Figure 2

Snapshot of “Quick Search” result

Search result						
Your query covers 73656 measures					 Export to excel  Show details	
<input checked="" type="checkbox"/> Show affected countries grouped (bilateral, All partners)						
Measures:						
Country imposing	Partner affected	Requirements	Phase	Measures	<input type="checkbox"/>	
Afghanistan	All Members	Export-related measures	In force	12	<input type="checkbox"/>	▲
Afghanistan	All Members	Other measures	In force	2	<input type="checkbox"/>	

- Select all measures using the checkbox in the last column (Figure 2)
- Click the “Show details” icon in the extreme right corner (Figure 2) to see a detailed overview of all applied NTMs (Figure 3).
- Click the “Export to excel” icon on the right corner of the results window (Figure 3) to export the NTMs data.

Figure 3

Snapshot of the NTMs search results tab

Selected search criteria	
Measures:	Sanitary and Phytosanitary [SPS] [A], Technical Barriers to Trade [TBT] [B], Pre-shipment inspection [INSP] [C], Contingent trade protective measures [CTPM] [D], Quantity control measures [QC] [E], Price control measures [PC] [F], Other measures [OTH] [G,H,I,J,K,L,M,N,O], Export-related measures [EXP] [P] <input type="button" value="Reset to defaults"/>
Country(ies) imposing:	Any
Partner(s) affected:	Any [Include the category "All partners"]
Date(s):	12/10/2020 [in force]
Product(s):	Any <input type="button" value="Modify"/>

Search result	
Your query covers 73656 measures and	 Export to excel  Return to summary
Your selection resulted in	

Appendix III

Data Collection Tier I – Preliminary Survey

The survey questionnaires in this appendix, both firm and agency level, are meant to be the first attempt to obtain an overview of NTMs under review and associated challenges in terms of their design, implementation (for agencies) and compliance (for firms). As the first tier of stakeholder engagement process, the surveys are designed to help establish if an in-depth review of the NTMs is required.

A. Firm level survey

1. Please identify all the procedural/documentary requirements that your firm needs to follow in order to import the given [intermediate input]
 2. Do you understand the rationale behind these requirements?
 - Yes, all of them
 - Yes, but only for some of them
 - No, I do not understand the rationale behind any
 3. According to you, how useful are these requirements?
 - Very useful
 - Somewhat useful
 - Not very useful
 - Not useful at all
 4. How satisfied are you with the implementation of these requirements?
 - Very satisfied
 - Somewhat satisfied
 - Neutral
 - Somewhat dissatisfied
 - Very dissatisfied
 5. Which of the following issues do you most commonly encounter when complying with these requirements?
 - Large amount of paperwork
 - Lack of clarity on requirements
 - Long wait time, at the border
 - Long wait times to obtain certificates or permits
 - Difficulty in dealing with government staff
 - The need to pay bribes
 - Technological constraints
 - Lack of adequate testing capacity
 - Others, please specify
 6. Do these requirements have any negative impact on your business operations
 - No negative impact
-

- Slows down operations
 - Reduces domestic sales
 - Reduces exports
 - Others. Please specify
7. Please select from the below mentioned options the extent of the impact of these requirements on the costs of doing business.
- Very significant
 - Significant
 - Neutral
 - Almost insignificant
 - Insignificant
8. Will your firm be able to provide detailed compliance cost information?
9. Would you say these NTMs benefit you in any way?
10. Do you find these requirements beneficial for your firms in anyway?
- The requirements benefit us in at least some ways
 - We do not understand any way in which these requirements benefit us.

B. Agency level survey

1. What public policy objectives does this measure intend to address?
- Plant protection
 - Animal health
 - Food safety
 - Environmental concerns
 - Protect territory from pest damage
 - Others, please specify
2. When was this measure developed and when was it last revised _____
3. How expensive was the regulatory design process?
- Very expensive
 - Reasonable expensive
 - Very inexpensive
 - Don't know/can't say
4. How would you explain the larger benefits of NTMs on -
- The society at large _____
 - The firms _____
 - The consumers _____
5. On a scale of 1 – 5 (being the worst), how would you rate the following aspects of NTM implementation –
-

- Transparency (For the private sector)
 - Presence of trained staff
 - Implementation budget
 - Technical capacity for implementation
6. How long does the process of complying with this NTM take for the private sector (Processing a permit/ conducting inspections, etc.)
 7. Does the implementation of these measures impose a high cost burden on the agency?
 - Yes
 - No
 - Can't say
 8. Will your agency be able to provide detailed implementation cost information for this NTM?
-

Appendix IV

Stakeholder Engagement Tier II – Inception Workshop Guiding Questions

This appendix serves as a guide to facilitating discussions in the inception workshop. The following guiding questions can be used by the moderator.

Toolkit related

1. After going through the toolkit goals and proposed methodology, what is your general perception about subject matter of the toolkit?
2. What is your perception regarding the feasibility of the project i.e. its alignment to your interests?
3. What are your expectations vis-à-vis the end results of the toolkit deployment?
4. What additional parameters can make the toolkit deployment in this sector more meaningful for you, as firms and implementing agencies?

NTM related

1. Given the intermediate input and NTMs under consideration, to what extent does the toolkit interest you?
2. **For firms:**
 - 2.1 Please elaborate on your experience in dealing with NTMs applicable to importing the product under consideration. What problems do you face when complying with the NTMs?
3. **For agencies:**
 - 3.1 Please provide some insights into the NTM design process.
 - 3.2 Please provide some insights into the NTM implementation process.
 - 3.3 Would you say that the NTM is meeting the objectives it is designed for? How can you say that?
4. Given the product and NTMs under consideration and the issues discussed, how can this toolkit be adapted/implemented to make the results meaningful?

Note – The interactive session must also include a discussion around the specific insights obtained or pressing issues identified in the Tier 1 Preliminary Surveys.

Appendix V

Stakeholder Engagement Tier III – In-Depth Interview Guidelines (Firm and Agency Level)

The Interview Guidelines form a core component of the NTM cost effectiveness toolkit. They are a set of questions that should be used by the interviewer in engaging with the main stakeholders i.e. the government agencies responsible for NTM implementation and the regulated firms. It provides an opportunity to probe deeper into NTM design, implementation and compliance and get firm and agency perspectives on the same. The set of questions are not binding. Neither are they complete. The interview is designed to be semi-structured and the interviewer must exercise judgement to delete, or add any questions or probe deeper depending on the sectoral and national context.

Firm-Level Interview Guidelines

Key topics of interest	Question theme	Probe questions
Administrative formalities	<i>Are administrative processes and requirements streamlined?</i>	<ul style="list-style-type: none"> • Please indicate all documents you are required to file/submit prior to import? At the time of import? • Is the process of preparing and submitting these documents complicated? Which documents do you find most challenging to furnish or file? • Are there any overlaps/duplications in documentary requirements? Please indicate where? Is there any single window? • How many checks/inspections do you have to go through at the border? Is there any duplication in these checks/inspections? Do single windows exist?
Time constraints	<i>Do firms face any time constraints when complying with the NTMs?</i>	<ul style="list-style-type: none"> • How much time do you spend in preparing the documents/paperwork? Is this time reasonable for you? Which documents are most challenging to furnish? Why? • How much time does the responsible government agencies take for processing your documents or applications? Does the amount of time affect your business operations in any way? Have there been any unusual delays? What was the reason for such delays and with which agency/for which requirement? • Do you think that the checks/inspections at the border are carried out smoothly and efficiently? Please indicate the average time taken. Are there any unusual delays? What was the reason for such delays?
Transparency	<i>Is the private sector fully aware of all NTMs, their rationale and procedural requirements for compliance?</i>	<ul style="list-style-type: none"> • Was your firm involved in the process of designing (or reviewing) this NTM? Which regulation/agency was this? What about the others? Please explain how your views were taken into consideration and if there were any conflicts? Were you satisfied with the end results? • Are you clear about all requirements and procedures you are required to meet when importing the product? Which ones are particularly unclear? • Do you understand the rationale behind these NTMs? Which ones are uncertain?

Key topics of interest	Question theme	Probe questions
		<ul style="list-style-type: none"> • Have the concerned agencies made available all necessary requirements necessary for compliance available online? Can you provide a link to the website? Which agency most difficult to deal with? • Is the information available in an easy to understand, non-technical format? What challenges do you face when trying to familiarize yourself with these requirements? Which particular regulations are most challenging to comprehend? • Have you ever encountered any discrepancies in the published and the actual requirements? Please elaborate. • Are there frequent changes in the regulatory requirements? Are you updated about any such changes in a timely manner? For which agency/case is the problem most severe? • Is it easy to reach out to the government agency in case of questions or concerns? Can you please explain the process and share experiences? Which ones are particularly hard to contact?
Quality of Implementation Staff	Is the implementation staff professional and competent?	<ul style="list-style-type: none"> • Is the process of dealing with government agency staff smooth? What are the key issues faced? With which agencies? • Can you recount any bad experience during the last one year where the staff lacked professionalism or behaved in an arbitrary manner? • In your opinion, is the staff conducting inspections at the border well trained and has the necessary knowledge and expertise on the product being inspected? Can you explain why you do or don't believe so? Have you faced any bad experience? Please explain.
Agency Support	<i>Is the firm receiving adequate support from responsible agencies to smoothen compliance?</i>	<ul style="list-style-type: none"> • Have the concerned government agencies conducted any reviews on the barriers your firm is facing with respect to the requirements? Please identify cases. • Has the government agency provided any checklists or guidance to make it easy for you to comply with these requirements? Which agencies have/have not? • Are you familiar with any mechanisms for registering complaints? If yes, please provide a reference and share any experience. If no, please indicate if the absence of such platform is an issue for you? For which requirement is the problem most pronounced? • Are procedures like filing applications, paying fee automated? Does that make the process more convenient for you? Please recount specific challenges. • Have you encountered any cases wherein technological constraints hindered the NTM implementation? Please elaborate.
Compliance costs	To what extent do these NTM impose a high cost burden on the firm?	<ul style="list-style-type: none"> • Is complying with these NTMs costly for your firm? How would you rate these costs? Please choose an option from below – <ul style="list-style-type: none"> o Very high o High o Average o Not very high o Insignificant

Key topics of interest	Question theme	Probe questions
		<ul style="list-style-type: none"> • Please indicate and elaborate which of the following cost elements are most burdensome and indicate the corresponding requirement? <ul style="list-style-type: none"> o The fee/charges payable to agencies <ul style="list-style-type: none"> – One time – At the time of import o One-time costs <ul style="list-style-type: none"> – Asset, equipment, software purchased – Fines and legal disputes – Cost of third-party services, legal or technical o Recurring costs <ul style="list-style-type: none"> – Education – Administrative (Notification, publishing of documents, record keeping) – Employee training costs – Costs of internal inspections – Others • Overall, do these NTMs result in a higher input or production costs for your firm? • If these NTMs did not exist, what else would your business have done with the money spent on ensuring compliance? • Are these costs an obstacle to importing the product? How is your firm dealing with it? • Can you provide detailed estimates of these costs? (Refer to Tier 3 of Data Collection)
Benefits	Does the firm see any benefits arising to it from the NTMs?	<ul style="list-style-type: none"> • Does these NTMs benefit your firm in any way? Please share some examples or experiences, while taking into consideration the following – <ul style="list-style-type: none"> o Reduction in workplace accidents o Improved product quality o Increased consumer confidence o Ease of accessing export market o Avoiding wastage in production process o Accountability for CSR objectives

Agency-Level Interview Guidelines

Key topics of interest	Question theme	Probe questions
NTM objectives	Are NTM objectives clearly defined?	<ul style="list-style-type: none"> • Please define the problem or risk (a market failure) that the NTM was designed to address? What was the underlying motivation/concern? • Why was government action necessary? • Through what mechanisms can the NTM address the policy objectives it is designed to address. Did you have any scientific evidence to substantiate this? • How serious is this problem or risk under consideration? Who will be affected and what will be the nature of the impact on each group? Can you quantify this? • What is the likelihood of occurrence of the primary risk that the measure intends to address? • How serious would be the consequences if the risk occurred? • When do you last recall the risk occurring – <ul style="list-style-type: none"> o After the measure was put in place o Before the measure was put in place
NTM design and review process	Has the NTM been designed carefully through a consultative process and by accounting for international standards?	<ul style="list-style-type: none"> • For all NTMs: When did this NTM come into force? • For old NTMs: When was the measure last reviewed? If yes, how were these updated and on what basis? How did the risk/problem that the measure intends to address change between the time it was first put in place and when it was reviewed.? • Were alternative approaches to address the problem/risk under consideration discussed? • Did you take into consideration the ability of the government to implement this NTM effectively? • Were all necessary stakeholders involved in the measure design (or review) process? This includes – private sector, other relevant ministries/agencies, customs, independent experts, NGOs. • Please indicate, along with reasons, situations of any conflict with these stakeholders and how these was addressed? • Is the regulation based on any international regulation or law? Please identify the relevant international standard and how the national standard compares to it?
Implementation process	Is the step wise procedure for Implementation clearly defined?	<ul style="list-style-type: none"> • Please explain the step wise process for enforcing this measure. • Please identify the different documents as well as the various steps the private sector requires to ensure compliance.
Implementation time	How efficient is the Implementation process? (For NTMs related to inspections and testing)	<ul style="list-style-type: none"> • What is the average time taken to inspect each shipment? • Have there been instances of unusual delays? For what reasons? What steps have you taken to minimize delays? • For each consignment inspected during the last one year, please indicate if any specific obstacles were faced and the reasons thereof. • Did these issues lead to rejection? Please elaborate on the specific case and the amount of loss.
Implementation time	How efficient is the Implementation process? (For NTMs related to license/ permit/certificate processing)	<ul style="list-style-type: none"> • What is the average time taken to process a new license, certificate or permit? • Have there been instances of unusual delays? For what reasons? What steps have you taken to minimize these delays?

Key topics of interest	Question theme	Probe questions
		<ul style="list-style-type: none"> • For all applications/renewals processed during the last one year, please indicate any issues encountered. These may concern with such factors as – <ul style="list-style-type: none"> o Incomplete applications o Late applications o Non-receipt of application fees in time
Implementation costs	Does the NTM Implementation impose a high cost burden on the agency?	<ul style="list-style-type: none"> • Is enforcing this NTMs costly for your agency? How would you rate these costs? Please choose an option from below – <ul style="list-style-type: none"> o Very high o High o Average o Not very high o Insignificant. • Please indicate and elaborate which of the following cost elements are most burdensome? <ul style="list-style-type: none"> o One-time costs such as investments in fixed assets o Recurring costs - <ul style="list-style-type: none"> – Publicizing NTMs and updates to them – Assessing and approving applications and processing renewals – Conducting inspections – Recruitment and training of Implementation staff – Managing and resolving private sector complaints – Others • Can you provide cost data for all expenses pertaining to the Implementation of this NTM for the specific imported product? (Refer to Tier 3 of Data Collection)
Implementation strategy	How does the agency determine the nature and extent of the NTM's Implementation? (Applies to Inspections Only)	<ul style="list-style-type: none"> • Do you inspect all imported consignments? What is the probability of an import consignment being inspected at the border? • Where does the inspection take place – only at the border, or even in the hinterlands? • How do you decide what to inspect and what not to? Do you have risk management systems in place to determine this? • How do you adapt your approach based on experience?
Transparency	Has the agency taken adequate measures to ensure that the regulated firms are fully aware of the NTM, its rationale, and procedural requirements for compliance?	<ul style="list-style-type: none"> • Is the NTM, its rationale and the relevant compliance requirements clear and readily available to the private sector? How? Is this information available online? If yes, on which website? • Have you taken any other steps to ensure that the private sector is made aware of the requirements and where these can be found? • Is this information available in easy to understand, non-technical language?
Stakeholder coordination	Is the measure implemented in coordination with other relevant government agencies such that duplication can be avoided?	<ul style="list-style-type: none"> • Please explain how your activities and objectives relate to those of the customs or any other government agencies? • How do you coordinate with these agencies? • Please indicate any instances of, reasons for, and consequences of poor coordination with either of these agencies in the past one year?

Key topics of interest	Question theme	Probe questions
Resource allocation	Has the government agency allocated adequate resources for smooth Implementation of the NTM?	<ul style="list-style-type: none"> • Do you have a well-defined budget for enforcing the NTM? • Have you encountered a situation in the past where there was a shortage of funds for properly implementing the budget? Please explain the situation in detail. • Do you have adequate staff to implement the NTM – conduct inspections, monitor compliance or process applications for licenses, permits or certificates? • What is the hiring process for the staff? • Do you provide generic training activities to the staff on ensuring professionalism and transparency in their work? How frequently are such training activities provided? Can you share some content or material? • Do you provide technical training activities to the staff to impart skills necessary for conducting inspections? How frequently are such training activities provided? Can you share some content?
Facilitating smooth compliance	Is the government agency talking adequate measures to identify and eliminate any bottlenecks to ensuring compliance by the regulated firms and putting in place systems that make compliance easier?	<ul style="list-style-type: none"> • Do you have any toolkit or checklist to aid the private sector in complying with the NTM? • Please indicate if and to what extent are the compliance and implementation procedures automated? (This includes permit processing, filling application forms, screening of applications, revenue collection, etc.) • Are there established mechanisms for registering complaints? <ul style="list-style-type: none"> o What are these mechanisms? o What is the process of monitoring and addressing such complaints? o How frequently are they used by the private sector? o How many complaints were received during the last one year, their nature, and how these were resolved? • As an agency, have you taken any steps to ensure compliance by either promoting, incorporating controls, or imposing sanctions for non-compliance? • Please indicate the number of instances of non-compliance with the NTM noted during the last one year. What were the specific instances for the non-compliance and the reasons thereof? How were these issues resolved? • Please indicate the total percentage of consignments rejected due to non-compliance, during the last one year?
Effectiveness	Is the NTM achieving the objective it is designed to?	<ul style="list-style-type: none"> • Would you say that the NTM is achieving the objectives it was designed for? Can you substantiate how? • If the NTM was recently put in place: can you provide an estimate of the potential harm mitigated between when the NTM did not exist and after? • If the NTM is old: How do you assess whether the NTM is meeting its intended objectives? Have there been instances where the primary risk that the measure intends to address occurred? How many such cases can you recall in the last one year? 5 years? Has there been any change? • Please indicate the key stakeholders who have benefitted from this NTM? How? Please refer to intermediate consumers, final consumers as well as the society at large.

Appendix VI

Stakeholder Engagement Tier IV – Detailed Cost Assessment

This appendix provides a template to be used for filling detailed cost-related information associated with –

- i. **NTM compliance for firms** covering (i) Fee/charges payable to implementation agencies, (ii) Fixed/one-time costs and (ii) Recurring costs.
- ii. **NTM implementation for agencies** covering both (i) Fixed/one-time costs and (ii) Recurring costs.

A ready-to-use spreadsheet is provided in the excel link below -



Cost Assessment
Spreadsheet

Appendix VII

Approach to Analyzing Stakeholders Inputs

This appendix presents an approach with some examples to analyzing data and information collected during the in-depth interviews, one of the most critical tiers of the stakeholder engagement process, for (i) Firm level interviews and (ii) Agency level interviews

A. Firm level interviews analysis

1. Checklist Matrix

Dimension	Question	Firm 1		
		Yes	No	n/a
Administrative Formalities	Does the firm complain of lack knowledge of all the necessary documentary requirements for importing?			
	Does the firm complain that process of preparing and submitting documents is complicated and burdensome?			
	Does the firm complain of any duplications or overlaps in documentary procedures?			
	Does the firm find the inspections to be cumbersome?			
Time constraints	Does the firm complain of any unusual delays in processing of applications?			
	Does the firm complain of any unusual delays in border checks and clearing of shipments?			
Transparency	Does firm complain that it was not involved in NTMs design process?			
	Was the firm dissatisfied with the outcomes of the design process?			
	Is the firm unclear of the procedural requirements for ensuring compliance?			
	Is the firm unclear about the rationale behind the measure?			
	Does the firm complain of difficulties in accessing all information about the NTM online?			
	Does the firm find it difficult to understand the available information?			
	Does the firm complain that it does not receive updates on changes in the requirements in a timely manner?			
Quality of Implementation Staff	Does the firm complain the process of dealing with government agency staff as being smooth?			
	Does the firm complain that the agency staff is unprofessional?			
	Does the firm complain that the agency staff is incompetent?			
	Does the firm complain the process of dealing with inspectors at the border as being smooth?			
	Does the firm complain that the inspections staff is unprofessional?			
	Does the firm complain that the inspections staff is incompetent?			

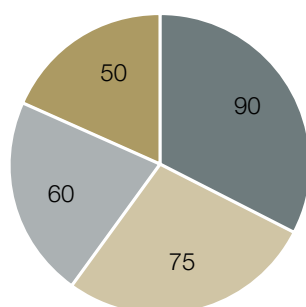
Dimension	Question	Firm 1		
		Yes	No	n/a
Agency Support	Does the firm complain that the government agencies have not taken any measures to assess barriers to compliance?			
	Does the firm complain that the government agencies have not provided any guidance or other documents to simplify compliance?			
	Does the firm complain that is not aware of any mechanisms for registering complaints?			
	Has the firm had an issue where a complaint was not resolved promptly?			
	Does the firm complain about the processes for filing applications and payment of fees not being automated?			
Costs	Does the firm find compliance with these NTMs to be costly?			
	Which of the following are particularly costly from the point of view of the firm?			
	- One-time fee/charges			
	- Shipment specific fee/charges			
	- Cost of assets/equipment/machinery			
	- Fines and legal disputes			
	- Education			
	- Administrative			
	- Third party services			
- Employee training				
Benefits	Does the firm state that it does not see any benefits arising from the NTM?			

2. Coding and Descriptive Analysis

2.1 Identify common themes in interview responses and prepare descriptive statistics

Example -

Percentage of firms raising the issue



- Absence of mechanism to file complaints
- Lack of cross-border agency cooperation
- High fee charged for shipment clearance
- Lack of full knowledge of procedural requirements

2.2 Prepare descriptive analysis of interview responses identified in step 2.1

Example

Common Theme	Percentage of firms for which this is an issue	Descriptive analysis of the problem
Absence of mechanisms to file complaints	90%	Firms state that it has been difficult in the past to report any issues causing delays in shipment clearance at the border. Often, goods are retained at the border for several weeks. Yet, it has been difficult to find a platform - online or otherwise - where they can directly reach out to the concerned agency and report problems.
Lack of cross-border agency cooperation	75%	Firms complain that the three agencies at the border who inspect goods prior to release often conduct similar procedures and inquiries. Such repetition leads to long clearance times

B. Agency level interview analysis

Checklist Matrix

Dimension	Question	Yes	No	n/a
NTM Objective	Can the agency identify the problem that the NTM intends to address?			
	Can the agency provide evidence to show that the problem is serious or irreversible?			
	Can the agency provide the main mechanism through which the NTM will meet the desired objective?			
NTM design and review process	Were multiple approaches to addressing the primary problem considered when designing the NTM?			
	Did the design process incorporate views from main stakeholders?			
	Is the NTM in line with international standards?			
	Is the NTM regularly reviewed?			
Process and Time	Can the agency provide a step by step implementation process for the NTM under consideration?			
	Can the agency provide the exact number of the documents required and the fee payable for complying with the NTM?			
	Can the agency provide an exact timeline for NTM implementation?			
	Has the agency adhered to the mentioned timeline in at least 90% of cases i.e. minimal delay?			
	Is the fee charged from the firms reasonable i.e. commensurate with the value of shipments?			
Cost	Does the agency report the implementation costs as being high?			
	Which of the following are particularly costly from the point of view of the firm?			
	Investments in fixed assets			
	Assessing and approving applications and processing renewals			
	Conducting inspections			

Dimension	Question	Yes	No	n/a
	Recruitment and training of implementation staff			
	Managing and resolving private sector complaints			
Strategy	Are all shipments inspected?			
	Is the decision to inspect risk-based?			
	Is the agency able to explain whether the inspections are either risk-based or random?			
Transparency	Are compliance requirements and procedures made available online?			
Stakeholder coordination	Does the agency make any effort to ensure that the private sector is kept up to date with any changes in NTMs			
	Does the agency communicate with other border agencies on the issue of NTM implementation?			
	Do any mechanisms for carrying out joint inspections exist?			
	Is there any sharing of facilities or equipment among inspections agencies?			
	Have any efforts been made to harmonize documentary requirements?			
	Do single windows exist?			
Internal Staffing	Does the agency carry out generic staff training activities for implementing staff?			
	Does the agency carry out technical staff training activities for those responsible for carrying out inspections?			
	Is there a document laying out the roles and responsibilities of implementation staff?			
Facilitating smooth compliance	Can regulated firms make applications for licenses or certificates online?			
	Can regulated firms pay fee and charges online?			
	Are there mechanisms for private sector to register complaints			
	Does the government agency take any steps to promote compliance?			
	Do there exist sanctions to penalize non-compliant firms?			
	Can the agency provide any instances where barriers to compliance were assessed, through a stock take of complaints or by engaging with the private sector?			
Effectiveness	Has the agency carried out any assessment to show that the NTM achieving the desired objectives?			
	Does the agency believe the NTM is achieving the desired objectives?			
	Can the agency provide any evidence to show that the objective is being achieved?			
	Can the agency identify who the beneficiaries of the NTM have been?			

Note - In the case of agency checklists, the response for each NTM must be viewed independently for its design and implementation. As such, there is no need for assigning values, calculating scores, or coding. In this case, problems and issues must be assessed and recorded for each NTM separately and a descriptive analysis should be prepared accordingly. Policy options should target individual NTMs.

Appendix VIII

Terms of Reference for Implementing Staff

In keeping with all the steps of the NTM cost-effectiveness toolkit, this appendix provides the terms of reference for the consultants/staff who will be responsible for implementing the toolkit. The toolkit proposes two categories of staff, (i) senior trade policy expert, responsible for mostly the substantive matters, and (ii) assistant trade policy expert/analyst responsible for providing support on substantive matters and managing administrative matters. Users may however choose to divide the work as they deem fit and even hire multiple specialists for specific tasks. The list of tasks and required skills may also be adapted.

A. ToR – Trade Policy Expert

Title:

Trade Policy Expert

Tasks:

In general, the expert must study in detail, the cost-effectiveness toolkit to understand its objectives, design and implementation procedure; and identify all the necessary steps required to be performed. For the performance of each of these steps, the NTM cost-effectiveness toolkit provides several tools as well as suggestions on the different steps. The consultant must be able to adapt and modify the approaches based on national and sectoral contexts to promote further development of the toolkit.

In specific, the consultant must -

1. **Perform value chain analysis:** For the 3-4 value chains of interest identified by the [ministry], the consultant must analyze them to identify critical intermediate inputs and map/validate the applicable NTMs from the UNCTAD TRAINS Database or and by working with relevant national government agencies, based on a pre-established procedure.
 2. **Stakeholder identification:** For the final intermediate input selected, map the relevant stakeholders including government and private sector.
 3. **Stakeholder engagement:** Meet with all identified stakeholders to briefly explain project objectives and conduct tier I preliminary surveys, present/moderate the inception workshop, and conduct in-depth interviews post inception workshop, as well as present and disseminate the final assessment report during the validation workshop.
 4. **Stakeholder input analysis:** Based on the surveys, inception workshop and in-depth interviews, analyze the information and insights received by using descriptive statistics, coding and estimation of NTM compliance and implementation costs, to prepare a list of preliminary findings/user-friendly fact sheets + seek clarifications where necessary.
 5. **Policy Options:** Generate a list of potential policy options based on the preliminary findings and identify and meet with additional senior level policy makers to discuss and develop them further as well as obtain their buy in for putting them into action and present them during the validation workshop. Coupled with further potential bilateral meetings, the workshop has two goals: First, to validate the information summarized in the factsheet with stakeholders. Second, to increase stakeholders' awareness and understanding of NTMs and flesh out the way forward in addressing them.
-

Deliverables:

1. Value chain assessment document
2. NTMs mapping
3. Tier I preliminary survey results
4. Tier II Inception workshop findings and key insights
5. Tier IV detailed cost assessment analysis
6. Document of preliminary findings
7. Final assessment report with policy options

Skills:

1. Advanced university degree in economics, international trade law or related subject, or equivalent work experience;
 2. At least 3 years of progressive work experience in domestic trade policymaking and an ability to manage relationships with government officials;
 3. At least 2 years of progressive work experience with private-sector associations (e.g. chamber of commerce; association of manufactures);
 4. Experience in designing, developing and conducting surveys and interviews
 5. Experience in using survey instruments for (electronic) data collection (Open Data Kit) and data analysis;
 6. Excellent project management and organizational skills; meticulous attention to detail
 7. Pro-active, flexible, independent, self-motivating, ability to manage multiple tasks efficiently and work under pressure.
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B. ToR for Analyst

Title:

Assistant Trade Policy Expert

Tasks:

1. **Liaise with stakeholders:** Reach out to the identified stakeholders to schedule meetings for surveys/ in-depth interviews or otherwise, as well as to invite them for the inception and validation workshop. Along with the Trade Policy Expert.
2. **Assist in surveys and interviews:** Assist the Trade Policy Expert in stakeholder engagement and interviews by taking notes, transcribing and analyzing them.
3. **Prepare and help run inception workshop:** Facilitate the planning and organizing of the inception workshop including logistical arrangement, take notes during the interactive session and transcribe them.
4. **Prepare and help run validation workshop:** Facilitate the planning and organizing of the validation workshop including logistical arrangements, take notes as necessary.

Deliverables:

1. Transcripts of surveys
2. Transcripts of inception workshop
3. Transcripts of in-depth interviews
4. Others, as required from time-to-time.

Skills:

1. University degree in economics, international trade law or related subject, or equivalent work experience;
 2. At least 1 year of progressive work experience in domestic trade policymaking and research
 3. At least 2 years of progressive work experience in documentation and record-keeping
 4. Excellent communication skills when interacting with government and private sector staff
 5. Pro-active, flexible, independent, self-motivating, ability to manage multiple tasks efficiently and work under pressure.
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Appendix IX

Dimensions of Stakeholder Engagement

Unlike the other appendices, which are tools to be used for toolkit deployment, this appendix is more descriptive and provides an overview of the main dimensions around which the 4-tier stakeholder engagement process is designed. These dimensions provide a basis for probing deeper into the 3 pillars of the toolkit, i.e. compliance, design and implementation.

Firm-Level – Compliance

1. Administrative formalities

Are administrative processes and requirements streamlined?

The requirement to prepare and submit many documents and to undergo multiple inspections and checks at the border can be extremely burdensome for regulated firms. From preparing applications for the purpose of obtaining or renewing certificates, licenses or permits; to making multiple trips to get a shipment released – the need to fulfill administrative formalities may require firms to dedicate a substantial amount of human and financial resources. What makes this even more challenging is when there are several government agencies to be dealt with, each requiring different documents with distinct filing or submission procedures, or multiple agencies inspecting the same shipment in pursuit of different goals. While these requirements may be put in place to fulfill legitimate objectives, unplanned and haphazard execution can make the process of compliance difficult and costly. A firm's ability to meet these administrative requirements with ease can have an important bearing on the overall cost of operations. As such, this dimension is a critical pillar of assessing bottlenecks to NTM compliance. Simplification of documentary requirements and procedures for imports, establishment of single windows and facilitation of joint inspections can help avoid overlaps and duplications making these requirements less difficult to comply with for the firms.

2. Time constraints

Does the private sector face any time constraints when complying with the NTMs?

Documentary compliance may require businesses to devote a substantial amount of time to obtain, prepare, process, present and submit documents before and during clearance and inspections at the port or during border handling. At the same time, responsible government agencies may take a long time to process applications and issue necessary permits or certificates. Further, businesses often complain about how sometimes, shipped goods may remain at the port of entry for several weeks before finally being released by the inspections staff. There may be several reasons behind such delays – inadequate, inefficient or incompetent implementation staff or technological challenges such as system outages. Such delays may require firm personnel to keep following up with the relevant agencies and end up becoming a source of frustration. The time lost can impede the firm's ability to comply with the NTM. Thus, assessment of NTM compliance must account for time taken for businesses to comply with NTMs in order to identify unnecessary steps and procedures. Government agencies must closely assess the reasons behind such delays and work to minimize them.

3. Transparency

Is the private sector fully aware of all NTMs, their rationale and procedural requirements for compliance?

From the point of view of regulated firms, transparency can be viewed from 2 angles. First, their involvement in NTM design process. The process of NTM design should be consultative and feedback should be sought from all stakeholders. This includes the private sector who will be most affected by the measure. Their views should be taken into consideration and it should be ensured that they are able to understand and appreciate the rationale for the measure. This reduces the possibility of any confusion or unnecessary frustration among the regulated firms at a later stage. Secondly, all necessary information about the NTMs, its rationale, the procedural and documentary requirements must be made available to the firms to eliminate any bottlenecks to compliance. This information should be published in simple, non-technical terms and any updates to the NTM should be made available to the private sector in a timely manner.

4. Quality of Implementation staff

Is the implementation staff professional and skilled?

Regulated firms have to deal with a wide range of government staff when importing. This may be for the purpose of obtaining permits, submitting documents, paying fees, cooperating in conformity assessment procedures, getting sample tests, etc. This makes it essential that dealing with the government agency staff is smooth. First, and most basic, the implementation staff must be professional in their interaction with the private sector. Second, staff carrying out more technical tasks, such as inspections or testing must be skilled in doing so. For instance, if the product being inspected may carry a pest or a disease, yet the inspections staff does not understand the scientific properties of the product and relies simply on physical inspections, may create more problems for the importing firms.

5. Agency support

Is the private sector receiving adequate support from responsible agencies to smoothen compliance?

On a regular basis, government agencies should review barriers to NTM compliance and take necessary action to ensure that compliance is as smooth as possible. A few recommendations to accomplish this goal may be –

- i. Making available checklists and guidance to speed up compliance
- ii. Using electronic systems for filing, processing and submitting applications and documents; making payments; and managing exchange of information. When implemented effectively, such systems can help save time and money by eliminating the need for multiple trips to government offices, long wait times as well as the need to pay bribes.
- iii. Setting up mechanisms for registering private sector complaints. This provides an opportunity to government agencies to assess barriers that the private sector is facing in complying with the NTM, and taking necessary steps to resolve the issues raised

6. Compliance Costs

To what extent do the NTMs impose a high cost burden on the private sector?

A key agenda of the NTM review process is to assess the costs of NTM compliance and to what extent does it impose a high cost burden on the firm. The stakeholder engagement process stresses on the need to focus on the following potential costs arising from complying with NTMs.

i. Fees and charges payable to responsible government agencies

These costs include administrative charges such as licence and permit issuance or renewal fees; levies; and mandatory insurance premiums payable to government. At the same time, it also includes mandatory charges per shipment/consignment payable prior to import or at the border or any fee paid for testing product samples.

ii. One-time Costs**a. Fixed asset investments**

Often, regulated firms may have to undertake investments in a specific equipment or software in order to ensure that it is in compliance with NTMs. This may be required for such purposes as treating emissions. This cost category covers the purchase price of these items as well as the cost of financing the purchase.

b. Fines and legal charges

Fines for failing to comply with an NTM, as well as legal fees arising from a related dispute may also form a substantial part of overall cost of compliance and hence must be accounted for when calculating them.

c. Costs of third-party services

Where technical or legal expertise is required to comply with an NTM, business may have to engage third parties to ensure NTM compliance. These could include independent consultants, legal or IT experts, or engineers and availing their services could come at a high cost to the firm.

iii. Recurring costs**a. Education costs**

Businesses have to incur costs for keeping up to date with regulatory requirements, familiarizing themselves with new or amended NTMs, developing in-house compliance strategies and allocating responsibilities to the staff who will be responsible for the day to day compliance procedures.

b. Administrative costs

Administrative costs are one of the most significant cost components of complying with NTMs. They can cover a wide range of cost categories – visiting government offices, maintaining records of paperwork, making notifications to the government, publishing documents, etc. A large proportion of these costs are associated with wages or salaries paid to labor/staff for completing the activities required to ensure regulatory compliance.

c. Employee training costs

Sometimes, complying with an NTM may require special training to be given to employees, say in cases where the NTM in questions deals with technical requirements such as monitoring emissions or assessing compliance with smoking laws. A firm may have to invest in training of such staff on a regular basis.

d. Costs of internal inspections

Businesses may have to spend time and money to carry out inspections or testing to be in compliance with an NTM. While some of these inspections may by default form an integral part of regular business operations, some may simply be regulatory requirements, otherwise unnecessary from a business standpoint. In such cases, the costs incurred on these internal inspections and testing are an extra cost for firms and must be accounted for when assessing compliance costs.

7. Benefits

Does the private see any benefits arising to it from the NTMs?

While complying with NTMs can be an expensive and a time-consuming process for business firms and ineffectively designed and implemented NTMs can cause the cost of doing business to mount up significantly, NTMs can also benefit firms in several ways. By requiring importing firms to comply with high product standards, NTMs can help firms improve the quality of finished product, thus increasing consumer confidence in both domestic and export markets. In fact, compliance with NTMs has been shown to also have a positive impact on exports under certain circumstances. NTMs requiring firms to conduct pest risk analysis, use superior quality inputs or control emissions can also have a positive impact on the private sector by reducing workplace accidents or wastages in production. Reviewing NTMs must thus account for any such potential benefits to firms, and firms must be encouraged to view these NTMs, not just in terms of the obstacles they present, but also in terms of the benefits they bring.

Agency-Level – Design and Implementation

1. NTM objective

Are NTM objectives clearly defined?

The first step to putting in place an NTM is to establish a justification for it. This requires clearly defining the market failure or the primary risk that the measure seeks to address. All NTMs must be designed to serve specific policy objectives. Institutions with a mandate to establish an NTM must be able to delineate the harm or risk that the NTM will mitigate or the positive outcomes it will contribute towards. This also includes accounting for the likely impact if the NTM did not exist. At the same time, adequate evidence must be provided to show that the risk under consideration can have a serious, irreversible impact. The justification for putting in place an NTM must be based on a consideration of the nature and the size of the policy problem that the NTM intends to solve; who and how many will be/are being affected in its absence, how large and long lasting will the effects be. This is important to ensure that the costs of the measure can justify its benefits. Of course, it can be hard to observe a counterfactual in such cases, but to the extent possible, the responsible parties must substantiate or give a valid justification for why the NTM is needed at all. The regulators must also analyze the mechanisms through which the NTM can address the problem or risk at hand. For instance, if an institution states that an NTM is meant to prevent the spread of a disease, an evidence-based, scientific justification for the same must be provided. The inability to define the objectives clearly can create a high cost burden on the implementers and restrict incentives to improve approaches and methods to achieve better results. More importantly, it makes it difficult to properly assess the effectiveness of the NTM in achieving the objective it intends to.

Ensuring that NTMs are properly targeted also necessitates that the mandate of each government institution is clearly defined in terms of its vision and mission. The mandates can be set in a variety of ways (generally through primary or secondary legislation, but they can also be supplemented through strategy documents approved by the supervisory board or ministry etc.).

2. NTM design (and review) process

Has the NTM been designed carefully through a consultative process and by accounting for international standards?

The NTM design process must incorporate a careful assessment and comparison of the different approaches or policy tools that may be used to address the problem under consideration, for instance – self-regulation

by the private sector. Of course, national governments may differ in their technical and financial resources to carry out such an analysis. Yet, to the extent possible, it is essential to weigh the pros and cons of the different possible means of achieving the desired policy objectives. This ensures that the NTM is put in place only if it is the best way to achieve the desired end results. At the same time, the ability of the government to implement the regulations effectively must be accounted for.

Another key to designing effective NTMs is to involve all relevant stakeholders in the design process. This includes government agencies with similar or overlapping mandates, private sector firms who will be affected by the NTM, as well as independent experts, for instance, environmental experts. A consultative NTM design process ensures that a platform is offered to those impacted by the NTMs to voice their points of view, share their expertise and engage in constructive discussions to make the NTM and its implementation more effective. It also reduces the possibility of duplication and the administrative burden the NTM may cause on the private sector. A consultative process also provides the stakeholders, particularly the regulated firms, an opportunity to understand and appreciate the rationale for the measure, thus enhancing transparency. Belize is an interesting case in point. Per the Economic Development Council (EDC) Act of 2017, the Government of Belize established a regulatory body to promote partnership and collaboration between public and private sectors, fostering a better business climate in the country. The regulatory body is made up of five representatives from the public sector and five representatives from the private sector. It commends line ministries, departments and regulatory agencies to initiate and support regulatory reform. The Council incorporates inputs from the private sector into recommendations for regulatory reforms presented to the Prime Minister.

Another important consideration when designing NTMs is to look at international standards like those of Codex Alimentarius, International Plant Protection Organization (IPPC) and the World Organisation for Animal Health (OIE). Before designing an NTM, responsible government institutions should examine whether a relevant international standard exists and whether it can be adopted or adapted to the national context.

As critical as the NTM design process, is the NTM review process. NTMs should be reviewed frequently by assessing their outcomes against rationale, and be updated, adjusted or eliminated if based on changing circumstances and situations. The review process must involve looking into the challenges that the regulated firms have been facing when complying with these regulations and taking steps to simplify the procedures.

3. Implementation Process and Time

Is the step wise procedure for implementation clearly defined? How efficient is the implementation process?

All responsible agencies must have a well-defined process for enforcing any given NTM. From the point where a regulated firm applies for a license or a permit to the point of final inspection of the imported product, every step should be clearly defined and systematically implemented. The number of documents required, the timeline for obtaining them, the related fees, the inspection time for getting lab tests or for physical inspections at the border – all should be established in advance by the responsible agencies and made available to the regulated firms.

The fee for obtaining or renewing certificates and permits imposes a high cost burden on firms, especially when they have to comply with NTMs issued by multiple agencies. What adds to the challenge is having to deal with unnecessary paperwork, administrative delays, multiple inspections – at the borders or in the hinterlands, etc. This is an addition to the cost of doing business.

In view of this, all responsible agencies must ensure that the -

- The procedures followed and the paperwork required to verify compliance by firms are clearly laid out. The processes should be simplified to the extent possible by removing red tape or other bottlenecks to ensuring compliance.
 - The time taken to issue and renew permits or licenses and to carry out inspections is minimized. Causes of frequent delays are carefully scrutinized and minimized.
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- The fee and charges payable by regulated firms are kept minimal and commensurate with the value of the shipment. Further, the fee payable by firms to different government institutions is set in coordination where possible.

4. Implementation cost

Does the NTM implementation impose a high cost burden on the agency?

NTMs do not only impose costs on the regulated firms, they also put financial pressure on the responsible government agencies who may have to invest in necessary infrastructure such as setting up and maintaining testing labs or incur labor and overheads costs for enforcing the measure effectively. Poorly implemented NTMs can result in an unnecessary increase in these costs for the agencies, who will in turn pass it on to the private sector in the form of high fees and charges to be paid to ensure compliance. As such, it must be ensured that the cost of enforcing NTMs is not burdensome for the implementation agencies. Often, this would mean having a well-defined budget for the specific department enforcing the NTM.

In specific, NTM implementation costs can include –

i. One-time costs

a. Fixed asset investments

Often, agencies may be required to undertake investments in a specific equipment or software or an infrastructural facility for enforcing the NTM. For instance, the plant health inspectorate in any country may be required to set up a testing lab and purchase equipment and machinery for the same. At the same time, devising and implementing inspections or licensing systems may require significant investments.

b. Recurring costs

Other variable costs associated with enforcing NTMs may include costs of –

- o Publicizing NTMs and any updates to them
- o Assessing and approving applications and processing renewals
- o Conducting inspections
- o Recruitment and training of implementation staff
- o Managing private sector complaints

5. Implementation Strategy

How does the agency determine the nature and extent of the NTM's implementation?

NTM implementation should be risk-based. This implies incorporating a systematic procedure for deciding what to inspect since it may not always be possible to inspect all shipments of an imported product. The decision to inspect or not should be proportional to the nature and the extent of risk that the imported product poses, and should be grounded in data and evidence. Often, implementation agencies are unwilling to reduce their discretionary power, and thus resist the introduction of risk-based approaches. This imposes high costs on regulated firms. The decision should be based on factors such as whether there have been any violations in the past, whether these violations are part of a pattern, whether the violations create serious risks for the public welfare (safety, health, environment etc.), the magnitude of these risks, etc. An official guidance on how to ascertain risks or on how implementation decisions should be taken can be a good approach to incorporating a risk-based NTM implementation strategy.

6. Transparency

Has the agency taken adequate measures to ensure that the regulated firms are fully aware of the NTM, its rationale, and procedural requirements for compliance?

NTM implementation will not be effective unless regulated firms are made fully aware of how compliance will be verified and provided an opportunity to understand the rationale behind a given NTM. At the same time, their involvement in forums where they are provided a chance to openly discuss their opinions or concerns are critical to securing their support towards the regulatory agenda. One of the primary concerns for private sector as far as NTMs are concerned is the lack of complete knowledge about the applicable regulations, the responsible agencies and the costs associated with compliance. Further, NTMs are frequently updated without an adequate and timely notification to the regulated firms. This creates a high amount of uncertainty, particularly for SMEs. Transparency and compliance go hand in hand and should be promoted through the use of toolkits and checklists for the private sector in simple, non-legal text, made easily available and accessible.

7. Stakeholder Coordination

Is the measure implemented in coordination with other relevant government agencies such that duplication can be avoided?

Implementation of an NTM should be coordinated with other relevant government agencies - particularly the customs and other border agencies. Overlaps and duplication such as multiple government institutions requiring firms to furnish documents serving more or less the same purpose, or inspecting the same consignment without coordinating goals with other border agencies is a waste of public resources and can create a high unnecessary cost burden on the regulated firms. Agencies should strive to maintain open channels of communications with other government agencies, work on establishing coherent implementation practices and prevent emergence of areas of conflicting competence. This may be achieved by joint examination of shipments, data harmonization, document alignment, integrated risk management, sharing of facilities and equipment such as IT systems and single windows for trade, or even conducting joint training activities. Such coordination and cooperation among agencies at the border can help reduce compliance and implementation costs, resulting in efficiency gains and lower operating costs.

8. Resource Allocation

Has the government agency allocated adequate resources – financial and human - for smooth implementation of the NTM?

An important requirement for effective, efficient, transparent and professional implementation of NTMs is to allocate adequate and appropriate resources towards it. This includes putting in place a well-defined budget for implementation so that the NTM can be administered and implemented smoothly, as well as making that sure that sufficient and suitable staff is available for the implementation. Every government agency responsible for enforcing NTM must have adequate implementation staff for the purpose of processing licenses or certificates and for inspecting consignments. Inadequacy of staff may lead to unnecessary delays for the importers, thus having a negative impact on the cost of doing business. At the same time, agencies must ensure that the rules and processes to be followed by staff responsible for enforcing and implementing an NTM are clearly laid down, and the responsible staff is trained to facilitate smooth implementation. This is particularly important for NTMs that relate to inspections, where the staff may require more technical, skill-based training. Trainings prior to and during staff tenure, and off and on the job, are all equally critical. Often, importers complain that the staff inspecting the shipment lacks the necessary knowledge and expertise on the scientific properties of the product being imported. This leads to an unreasonable amount of inspection time or an unnecessary rejection of the consignment, both equally detrimental for the firm concerned.

The responsible agencies must ensure that the staff is well equipped to perform its duties by -

- Defining and publishing the role, duties and obligations of the staff
- Imparting necessary technical skills to inspections staff, and
- Training them on the importance of professionalism and transparency

9. Facilitating smooth compliance

Is the government agency taking adequate measures to identify and eliminate any bottlenecks to ensuring compliance by the regulated firms and putting in place systems that make compliance easier?

Government agencies responsible enforcing NTMs must take adequate steps to ensure that the regulated firms are able to comply with the requirements as easily and smoothly as possible. This includes making use of information and communication technologies to submit applications or revenue collection to minimize continuous back and forth between the government and the private sector, providing mechanisms for the private sectors to register complaints and even providing easy to understand toolkits or checklists to ease compliance.

In order to avoid the likelihood of non-compliance, steps must be taken by government agencies to actively promote compliance, rather than assuming that everyone should know the law. This links to transparency, which is the foundation for ensuring compliance. Responsible agencies must regularly assess barriers to compliance, provide necessary advice and guidance to the private sector and engaging with the private sector more actively, setting up deterrents to non-compliance and other strategies must be adopted to ensure that the private sector is not only monitored but also encouraged to comply.

10. Effectiveness

Is the NTM achieving the objective it is designed to?

Once an NTM have been in force for a reasonable amount of time, it is important to compare the objectives and rationale with the actual results achieved. Given the time and financial resources that go into designing, enforcing and complying with any given NTM, it should at least be justified by carrying out an assessment of and substantiating as to how the NTM has led to any positive outcomes or has mitigated any potentially negative outcomes. An important element of this is to assess the main beneficiaries of the NTMs which may be the firms, consumers or the societies at large. Governments may adapt a variety of suitable methods of assessing this - doing a before and after analysis or making comparisons with similar sectors or countries. Being able to rationalize the existence of an NTM is an important responsibility of government institutions. Such an analysis will help identify NTMs which must be retained, adjusted or eliminated. The overall process of review can help in NTM improvement and help build greater confidence in the regulatory system.
