## **PARTICIPANTS MANUAL**: A Practical Handbook for National TB Laboratory Strategic Plan Development

### Introduction

This manual includes step-by-step exercises for the development of the TB laboratory plan. Such exercises are indicative and can be adapted per national requirements and preferences. These exercises should be facilitated, ideally, by a skilled international consultant or by an appointed national focal point familiar with strategic planning and TB-specific technical areas, particularly regarding laboratory strengthening linked with NTP strategies.

# Chapter 2: Preparation, political commitment, financing and planning for TB laboratory plan development- Participants Manual

**Exercise 2a: Preparation for the TB laboratory plan workshop**

**Exercise 2a:**

**Steps and checklist for preparation to develop the TB laboratory plan:**

1. Designate a local focal point for coordination of activities related to the TB laboratory plan development
2. Secure funds for 2 one-week workshops for 10 – 20 participants each and a consultant. Smaller countries should have fewer representatives whereas larger ones more. **A pre-requisite for invitation must be full-time participation throughout the workshop.**
3. Inform all stakeholders about your plans to develop TB laboratory plan well in advance
4. Develop and send out an agenda and invitations at least 2 weeks before the planning workshop (see the end of this chapter for example agenda templates)
5. Invite: MoH, National Health Laboratory, NTP, pediatricians, MDR-TB, TB/HIV, supply and finances specialists, partners
6. Book an adequate venue with break-away rooms to work in sub-groups
7. Prepare:

* Computers (also ask participants to bring their own computers)
* Projector
* Flipcharts (2 or 3 – depending on number of working groups)
* Extension cords and adapters
* CDs or memory sticks
* Files for papers
* Printer
* Printing paper
* Stickers
* Markers
* Handouts (both printed and electronic, CDs or memory sticks)
  + Agenda
  + Handbook
  + Templates for exercises
  + Reference materials
    - International
      * WHO and GLI policies, guidelines, targets and indicators
      * Global TB reports
* Country specific
  + National guidelines (TB manual, MDR-TB, TB/HIV, Infection control, etc.) and algorithms for the diagnosis of TB and DR-TB
  + NTP strategic plan and epidemiological data
  + Country TB reports
  + Review/assessment reports
  + National Health Laboratory Policy, Strategic Plan
  + TB laboratory SOPs
  + TB laboratory statistics
  + Country data (demographics, geography etc.)
    - * Data needed for exercises abstracted from the reference materials

Attendance list

# Chapter 3: Define a vision and a mission-Participants manual

**Exercise 3a: Development of a TB laboratory plan vision statement**

This exercise is an adaptation of an exercise to guide a large group through the process of creating a shared vision that has been modified from a Management Sciences for Health exercise (*Managers Who Lead. A handbook for Improving Health Services. Management Sciences for Health, 2005*)

**Exercise 3b: Development of a TB laboratory plan mission statement**

# Chapter 4: TB laboratory situational analysis-Participants manual

**Exercise 4a: TB-specific situational analysis**

**Exercise 4a: TB specific situational analysis**

**GROUP 1 ( 🞏 Square Group)**

1. **The TB specific contextual analysis (GROUP 1):**
2. **Epidemiological situation for TB**
3. **Description of NTP program and linkages between BNTP and NTRL**
4. **Laboratory objectives and targets according to the NTP strategic plan and the National health laboratories TB-specific objectives**
5. **National TB diagnostic and treatment guidelines**

**[Relevant reference materials: NTP guidelines, NTP strategic plan, national health laboratories strategic plan, WHO Global Report on TB (2011), National statistics reports, latest DRS surveys report, HIV/AIDS reports]**

**2. TB specific TESTS CURRENTLY AVAILABLE and Coverage**

**[Relevant reference materials: Medical Laboratories Policy, NTRL quality manual]**

**3. STRUCTURE OF THE LABORATORY NETWORK of TB diagnostics**

**[Relevant reference materials: Medical Laboratories Policy, AFB microscopy EQA implementation plan]**

**4. INFRASTRUCTURE OF THE LABORATORY NETWORK for TB diagnostics**

**[Relevant reference materials: NTP review reports, IC guidelines, EQA support visits reports]**

**Exercise 4a: TB specific situational analysis**

**GROUP 2 ( △Triangle Group)**

**5. HUMAN RESOURCES for the TB lab network**

**[Relevant reference materials: MOH strategic HRD plan, NTP HRD strategic plan, NHL strategic plan, NTP review reports, AFB EQA reports, external assessment of NTRL reports]**

**6. EQUIPMENT MAINTENANCE AND VALIDATION of TB lab equipment**

**[Relevant reference materials: Medical laboratories policy, NTRL quality manual, NTP review reports, external assessment of NTRL reports]**

1. **LABORATORY QUALITY MANAGEMENT SYSTEMS within the TB lab network**

**[Relevant reference materials: Medical laboratories policy, NTRL quality manual, AFB microscopy EQA plan, accreditation reports]**

1. **MANAGEMENT OF LABORATORY COMMODITIES AND SUPPLIES within the TB lab network**

**[Relevant reference materials: Medical laboratories policy, NTRL quality manual, NTP review reports, AFB EQA reports, CMS /SCMS list of supplies, external assessment of NTRL reports]**

**Exercise 4a: TB specific situational analysis**

**GROUP 3 ( Circle Group)**

1. **LABORATORY INFORMATION AND DATA MANAGEMENT for the TB lab network**

**[Relevant reference materials: NTRL quality manual, DISA manual, Meditech, PIMS, ETR, Open MRS, mycobacterial request/report form, microscopy and culture/DST register, MDR report tool]**

1. **SAMPLE REFERRAL SYSTEMS for the TB lab network**

**[Relevant reference materials: Medical laboratories policy, NTRL quality manual, Specimen collection and transportation manual]**

1. **OPERATIONAL RESEARCH regarding the TB laboratory network**

**[Relevant reference materials: NTRL quality manual, NTP strategic plan, NHL strategic plan, partners’ plans?]**

1. **LEGAL AND POLICY REVIEW for TB**
2. **FINANCES for TB laboratory services**

**[Relevant reference materials: NHL strategic plan, NTP strategic plan, partners’ reports and plans?]**

|  | **Actual** | | **Planned** | |
| --- | --- | --- | --- | --- |
| **Last year:** | **This year:** | **Next year:** | **Year after next:** |
| DOMESTIC FUNDING RESOURCES for TB Laboratory Services | | | | |
| Domestic source **A1**:  Loans and debt relief  *🡪 provide name of source here* |  |  |  |  |
| Domestic source **A2** National funding resources |  |  |  |  |
| Domestic source **A3**  Private sector contributions (national) |  |  |  |  |
| **LINE A: Total current & planned DOMESTIC resources**  *🡪 Total of Section A entries* |  |  |  |  |
| EXTERNAL FUNDING RESOURCES for TB Laboratory Services | | | | |
| External source **B1** *🡪 provide source name here* |  |  |  |  |
| External source **B2**  *🡪 provide source name here* |  |  |  |  |
| External source **B3** Private sector contributions (International) |  |  |  |  |
| **LINE B: Total current & planned EXTERNAL resources**  *🡪 Total of Section B entries* |  |  |  |  |
| **LINE C : Total current and planned resources** **for TB Laboratory Services**  *🡪 Line C = Line A+ Line B* |  |  |  |  |

**Exercise 4b: TB laboratory plan-SWOT analysis by Stop TB objectives**

The following 4 tables should be used for the participants to develop their SWOT for each of the four Stop TB objectives

| Objective 1: Increase access to quality-assured AFB microscopy with effective EQA | | | | |
| --- | --- | --- | --- | --- |
| Element of TB laboratory specific situational analysis | Strengths | Weaknesses | Opportunities | Threats |
| TB specific contextual analysis |  |  |  |  |
| TB specific tests currently available and coverage |  |  |  |  |
| Structure of the laboratory network of TB diagnostics |  |  |  |  |
| Infrastructure of the laboratory network of TB diagnostics |  |  |  |  |
| Human resources for the TB laboratory network |  |  |  |  |
| Maintenance and validation of TB laboratory equipment |  |  |  |  |
| Quality management systems within the laboratory network |  |  |  |  |
| Management of laboratory commodities and supplies within the TB laboratory network |  |  |  |  |
| Laboratory information and data management for the TB laboratory network |  |  |  |  |
| Sample referral system for the TB laboratory network |  |  |  |  |
| Operations research regarding the TB laboratory |  |  |  |  |
| Legal policy and review for TB |  |  |  |  |
| Finances for the TB laboratory services |  |  |  |  |

| Objective 2: Improve the diagnosis of TB among AFB-negative cases especially among people living with HIV | | | | |
| --- | --- | --- | --- | --- |
| Element of TB laboratory specific situational analysis | Strengths | Weaknesses | Opportunities | Threats |
| TB specific contextual analysis |  |  |  |  |
| TB specific tests currently available and coverage |  |  |  |  |
| Structure of the laboratory network of TB diagnostics |  |  |  |  |
| Infrastructure of the laboratory network of TB diagnostics |  |  |  |  |
| Human resources for the TB laboratory network |  |  |  |  |
| Maintenance and validation of TB laboratory equipment |  |  |  |  |
| Quality management systems within the laboratory network |  |  |  |  |
| Management of laboratory commodities and supplies within the TB laboratory network |  |  |  |  |
| Laboratory information and data management for the TB laboratory network |  |  |  |  |
| Sample referral system for the TB laboratory network |  |  |  |  |
| Operations research regarding the TB laboratory |  |  |  |  |
| Legal policy and review for TB |  |  |  |  |
| Finances for the TB laboratory services |  |  |  |  |

| Objective 3: Increase access to rapid laboratory diagnosis among TB patients considered at risk for M/XDR-TB | | | | |
| --- | --- | --- | --- | --- |
| Element of TB laboratory specific situational analysis | Strengths | Weaknesses | Opportunities | Threats |
| TB specific contextual analysis |  |  |  |  |
| TB specific tests currently available and coverage |  |  |  |  |
| Structure of the laboratory network of TB diagnostics |  |  |  |  |
| Infrastructure of the laboratory network of TB diagnostics |  |  |  |  |
| Human resources for the TB laboratory network |  |  |  |  |
| Maintenance and validation of TB laboratory equipment |  |  |  |  |
| Quality management systems within the laboratory network |  |  |  |  |
| Management of laboratory commodities and supplies within the TB laboratory network |  |  |  |  |
| Laboratory information and data management for the TB laboratory network |  |  |  |  |
| Sample referral system for the TB laboratory network |  |  |  |  |
| Operational research regarding the TB laboratory |  |  |  |  |
| Legal policy and review for TB |  |  |  |  |
| Finances for the TB laboratory services |  |  |  |  |

| Objective 4: Establish Laboratory Quality Management Systems | | | | |
| --- | --- | --- | --- | --- |
| Element of TB laboratory specific situational analysis | Strengths | Weaknesses | Opportunities | Threats |
| TB specific contextual analysis |  |  |  |  |
| TB specific tests currently available and coverage |  |  |  |  |
| Structure of the laboratory network of TB diagnostics |  |  |  |  |
| Infrastructure of the laboratory network of TB diagnostics |  |  |  |  |
| Human resources for the TB laboratory network |  |  |  |  |
| Maintenance and validation of TB laboratory equipment |  |  |  |  |
| Quality management systems within the laboratory network |  |  |  |  |
| Management of laboratory commodities and supplies within the TB laboratory network |  |  |  |  |
| Laboratory information and data management for the TB laboratory network |  |  |  |  |
| Sample referral system for the TB laboratory network |  |  |  |  |
| Operational research regarding the TB laboratory |  |  |  |  |
| Legal policy and review for TB |  |  |  |  |
| Finances for the TB laboratory services |  |  |  |  |

**Exercise 4c: TB laboratory plan situational analysis framework with major challenges and potential solutions by Stop TB objective**

| Objective 1: Increase access to quality-assured AFB microscopy with effective EQA | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Situational analysis topic** | | **Current situation** | **Current policies/expectations/**  **standards (national/international)** | **Main weaknesses/gaps** | **Potential solutions** |
| TB specific contextual analysis | 🞏 |  |  |  |  |
| Tests currently available | 🞏 |  |  |  |  |
| Structure | 🞏 |  |  |  |  |
| Infrastructure | 🞏 |  |  |  |  |
| Human Resources | △ |  |  |  |  |
| Equipment validation and maintenance | △ |  |  |  |  |
| Laboratory quality management systems | △ |  |  |  |  |
| Management of laboratory commodities and supplies | △ |  |  |  |  |
| Laboratory information and data management | 🔾 |  |  |  |  |
| Sample referral systems | 🔾 |  |  |  |  |
| Operational research | 🔾 |  |  |  |  |
| Legal and policy review | 🔾 |  |  |  |  |
| Finances | 🔾 |  |  |  |  |

| Objective 2: Improve the diagnosis of TB among AFB-negative cases especially among people living with HIV | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Situational analysis topic** | | **Current situation** | **Current policies/expectations/**  **standards (national/international)** | **Main weaknesses/gaps** | **Potential solutions** |
| TB specific contextual analysis | 🞏 |  |  |  |  |
| Tests currently available | 🞏 |  |  |  |  |
| Structure | 🞏 |  |  |  |  |
| Infrastructure | 🞏 |  |  |  |  |
| Human Resources | △ |  |  |  |  |
| Equipment validation and maintenance | △ |  |  |  |  |
| Laboratory quality management systems | △ |  |  |  |  |
| Management of laboratory commodities and supplies | △ |  |  |  |  |
| Laboratory information and data management | 🔾 |  |  |  |  |
| Sample referral systems | 🔾 |  |  |  |  |
| Operational research | 🔾 |  |  |  |  |
| Legal and policy review | 🔾 |  |  |  |  |
| Finances | 🔾 |  |  |  |  |

| Objective 3: Increase access to rapid laboratory diagnosis among TB patients considered at risk for M/XDR-TB | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Situational analysis topic** | | **Current situation** | **Current policies/expectations/**  **standards (national/international)** | **Main weaknesses/gaps** | **Potential solutions** |
| TB specific contextual analysis | 🞏 |  |  |  |  |
| Tests currently available | 🞏 |  |  |  |  |
| Structure | 🞏 |  |  |  |  |
| Infrastructure | 🞏 |  |  |  |  |
| Human Resources | △ |  |  |  |  |
| Equipment validation and maintenance | △ |  |  |  |  |
| Laboratory quality management systems | △ |  |  |  |  |
| Management of laboratory commodities and supplies | △ |  |  |  |  |
| Laboratory information and data management | 🔾 |  |  |  |  |
| Sample referral systems | 🔾 |  |  |  |  |
| Operational research | 🔾 |  |  |  |  |
| Legal and policy review | 🔾 |  |  |  |  |
| Finances | 🔾 |  |  |  |  |

| Objective 4: Establish Laboratory Quality Management Systems | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Situational analysis topic** | | **Current situation** | **Current policies/expectations/**  **standards (national/international)** | **Main weaknesses/gaps** | **Potential solutions** |
| TB specific contextual analysis | 🞏 |  |  |  |  |
| Tests currently available | 🞏 |  |  |  |  |
| Structure | 🞏 |  |  |  |  |
| Infrastructure | 🞏 |  |  |  |  |
| Human Resources | △ |  |  |  |  |
| Equipment validation and maintenance | △ |  |  |  |  |
| Laboratory quality management systems | △ |  |  |  |  |
| Management of laboratory commodities and supplies | △ |  |  |  |  |
| Laboratory information and data management | 🔾 |  |  |  |  |
| Sample referral systems | 🔾 |  |  |  |  |
| Operational research | 🔾 |  |  |  |  |
| Legal and policy review | 🔾 |  |  |  |  |
| Finances | 🔾 |  |  |  |  |

# Chapter 5: Prioritization of strategies and activities within Stop TB objectives-Participants manual

**Exercise 5a: Establishing targets for detection of smear-positive TB, smear-negative TB, MDR-TB and for quality management systems**

**Part I: GOAL**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Baseline** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Number of TB cases (all forms) notified |  |  |  |  |  |  |
| Number of new laboratory- confirmed TB cases notified |  |  |  |  |  |  |
| Prevalence of laboratory- confirmed TB |  |  |  |  |  |  |
| Prevalence of laboratory-confirmed MDR-TB |  |  |  |  |  |  |

**Part II: Stop TB Global Plan objective targets**

Objective 1: Increase access to quality-assured AFB microscopy with effective EQA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Baseline** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Number of laboratories performing AFB microscopy |  |  |  |  |  |  |
| Percentage of AFB microscopy laboratories that are quality-assured |  |  |  |  |  |  |
| Percentage of AFB microscopy laboratories that are using LED microscopy |  |  |  |  |  |  |

**Objective 2:** Improving the diagnosis of TB among AFB smear-negative TB cases, especially among PLHIV

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Baseline** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Number of laboratories performing culture |  |  |  |  |  |  |
| Number of laboratories performing rapid molecular diagnosis |  |  |  |  |  |  |
| Percentage of acid-fast bacilli (AFB) smear-negative, newly notified TB cases screened using culture and/or molecular-based tests |  |  |  |  |  |  |
| Percentage of acid-fast bacilli (AFB) smear-negative, previously treated TB cases screened using culture and/or molecular-based tests |  |  |  |  |  |  |

**Objective 3:** Increase access to rapid laboratory diagnosis of drug-resistant TB among TB patients considered at risk of M/XDR-TB

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Baseline** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Number of laboratories performing DST |  |  |  |  |  |  |
| Number of laboratories Performing DST using new diagnostic tools |  |  |  |  |  |  |
| Percentage of previously treated TB patients tested for drug-resistance |  |  |  |  |  |  |
| Percentage of new TB patients tested for drug-resistance |  |  |  |  |  |  |
| Percentage of tests for drug resistance performed on previously treated cases done using rapid tests |  |  |  |  |  |  |
| Percentage of tests for drug resistance performed on new cases done using rapid tests |  |  |  |  |  |  |
| Percentage of confirmed cases of MDR-TB with a DST result for fluoroquinolones and a second-line injectable drug |  |  |  |  |  |  |

**Objective 4:** Establish Laboratory Quality Management Systems

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Baseline** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Percentage of national and regional reference laboratories implementing a quality management system according to international standards according to national strategies |  |  |  |  |  |  |
| Percentage of TB laboratories with appropriate biosafety measures in place |  |  |  |  |  |  |
| AFB microscopy network accreditation (with GLI tool) |  |  |  |  |  |  |

**Exercise 5b: Priority areas for detection of TB (smear-positive and smear-negative cases), priorities for detection of MDR-TB cases and priorities for quality management systems**

Which lab issues need to be addressed to increase access to quality-assured AFB microscopy with effective EQA?

1. Priorities for increasing access to quality-assured AFB microscopy with effective EQA

| Broad priority identified (in order of priority with highest priority listed first) | Main activities (in order of priority) | Category per GLI framework: Infrastructure, HRD, QMS, Supply management and equipment validation, Specimen transport and referral, Information and data management, Regulatory framework, **or** Operations research | Where are you now? | Where do you want to be? | Achievable in 5 years?  Yes  No  Partially  (If No or Partially explain) |
| --- | --- | --- | --- | --- | --- |
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Which lab issues need to be addressed to improve the diagnosis of TB among AFB smear-negative TB cases, especially among PLHIV?

2. Priorities for improving the diagnosis of TB among AFB smear-negative TB cases, especially among PLHIV

| Broad priority identified (in order of priority with highest priority listed first) | Main activities (in order of priority) | Category per GLI framework: Infrastructure, HRD, QMS, Supply management and equipment validation, Specimen transport and referral, Information and data management, Regulatory framework, **or** Operational research | Where are you now? | Where do you want to be? | Achievable in 5 years?  Yes  No  Partially  (If No or Partially explain) |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |

Which lab issues need to be addressed to appropriately detect MDR-TB cases?

3. Priorities for increased access to rapid laboratory diagnosis of drug-resistant TB among TB patients considered at risk of M/XDR-TB

| Broad priority identified (in order of priority with highest priority listed first) | Main activities (in order of priority) | Category per GLI framework: Infrastructure, HRD, QMS, Supply management and equipment validation, Specimen transport and referral, Information and data management, Regulatory framework, **or** Operational research | Where are you now? | Where do you want to be? | Achievable in 5 years?  Yes  No  Partially  (If No or Partially explain) |
| --- | --- | --- | --- | --- | --- |
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Which lab issues need to be addressed to establish quality management systems?

4. Priorities for establishing laboratory quality management systems

| Broad priority identified (in order of priority with highest priority listed first) | Main activities (in order of priority) | Category per GLI framework: Infrastructure, HRD, QMS, Supply management and equipment validation, Specimen transport and referral, Information and data management, Regulatory framework, **or** Operational research | Where are you now? | Where do you want to be? | Achievable in 5 years?  Yes  No  Partially  (If No or Partially explain) |
| --- | --- | --- | --- | --- | --- |
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**Exercise 5c: Prioritizing strategies within STOP TB objectives**

Example:

Objective 1: Increase access to quality-assured AFB microscopy with effective EQA

|  |  |
| --- | --- |
| **Strategy 1.1** | **Strengthen laboratory infrastructure including biosafety** |
| *Activity 1.1.1* |  |
| Sub-activity 1.1.1.1 |  |
| Sub-activity 1.1.1.2 |  |
| **Strategy 1.2** | **Improve laboratory human resource development** |
| *Activity 1.2.1* |  |
| Sub-activity 1.2.1.1 |  |
| Sub-activity 1.2.1.2 |  |
| Sub-activity 1.2.1.3 |  |
| **Strategy 1.3** | **Develop and maintain laboratory quality management systems** |
| *Activity 1.3.1* |  |
| Sub-activity 1.3.1.1 |  |
| Sub-activity 1.3.1.2 |  |
| **Strategy 1.4** | **Enhance management of laboratory commodities and supplies including equipment validation and maintenance** |
| *Activity 1.4.1* |  |
| Sub-activity 1.4.1.1 |  |
| Sub-activity 1.4.1.2 |  |
| **Strategy 1.5** | **Fortify specimen transport and referral mechanisms** |
| *Activity 1.5.1* |  |
| Sub-activity 1.5.1.1 |  |
| Sub-activity 1.5.1.2 |  |
| **Strategy 1.6** | **Improve laboratory information and data management systems** |
| *Activity 1.6.1* |  |
| Sub-activity 1.6.1.1 |  |
| Sub-activity 1.6.1.2 |  |
| **Strategy 1.7** | **Establish a laboratory Regulatory framework** |
| *Activity 1.7.1* |  |
| Sub-activity 1.7.1.1 |  |
| Sub-activity 1.7.1.2 |  |
| **Strategy 1.8** | **Develop Operations Research capacity** |
| *Activity 1.8.1* |  |
| Sub-activity 1.8.1.1 |  |
| Sub-activity 1.8.1.2 |  |

Objective 2: Improve the diagnosis of TB among AFB-negative cases especially among people living with HIV

|  |  |
| --- | --- |
| **Strategy 1.1** | **Strengthen laboratory infrastructure including biosafety** |
| *Activity 1.1.1* |  |
| Sub-activity 1.1.1.1 |  |
| Sub-activity 1.1.1.2 |  |
| **Strategy 1.2** | **Improve laboratory human resource development** |
| *Activity 1.2.1* |  |
| Sub-activity 1.2.1.1 |  |
| Sub-activity 1.2.1.2 |  |
| Sub-activity 1.2.1.3 |  |
| **Strategy 1.3** | **Develop and maintain laboratory quality management systems** |
| *Activity 1.3.1* |  |
| Sub-activity 1.3.1.1 |  |
| Sub-activity 1.3.1.2 |  |
| **Strategy 1.4** | **Enhance management of laboratory commodities and supplies including equipment validation and maintenance** |
| *Activity 1.4.1* |  |
| Sub-activity 1.4.1.1 |  |
| Sub-activity 1.4.1.2 |  |
| **Strategy 1.5** | **Fortify specimen transport and referral mechanisms** |
| *Activity 1.5.1* |  |
| Sub-activity 1.5.1.1 |  |
| Sub-activity 1.5.1.2 |  |
| **Strategy 1.6** | **Improve laboratory information and data management systems** |
| *Activity 1.6.1* |  |
| Sub-activity 1.6.1.1 |  |
| Sub-activity 1.6.1.2 |  |
| **Strategy 1.7** | **Establish a laboratory Regulatory framework** |
| *Activity 1.7.1* |  |
| Sub-activity 1.7.1.1 |  |
| Sub-activity 1.7.1.2 |  |
| **Strategy 1.8** | **Develop Operations Research capacity** |
| *Activity 1.8.1* |  |
| Sub-activity 1.8.1.1 |  |
| Sub-activity 1.8.1.2 |  |

Objective 3: Increase access to rapid laboratory diagnosis among TB patients consider at risk for M/XDRTB

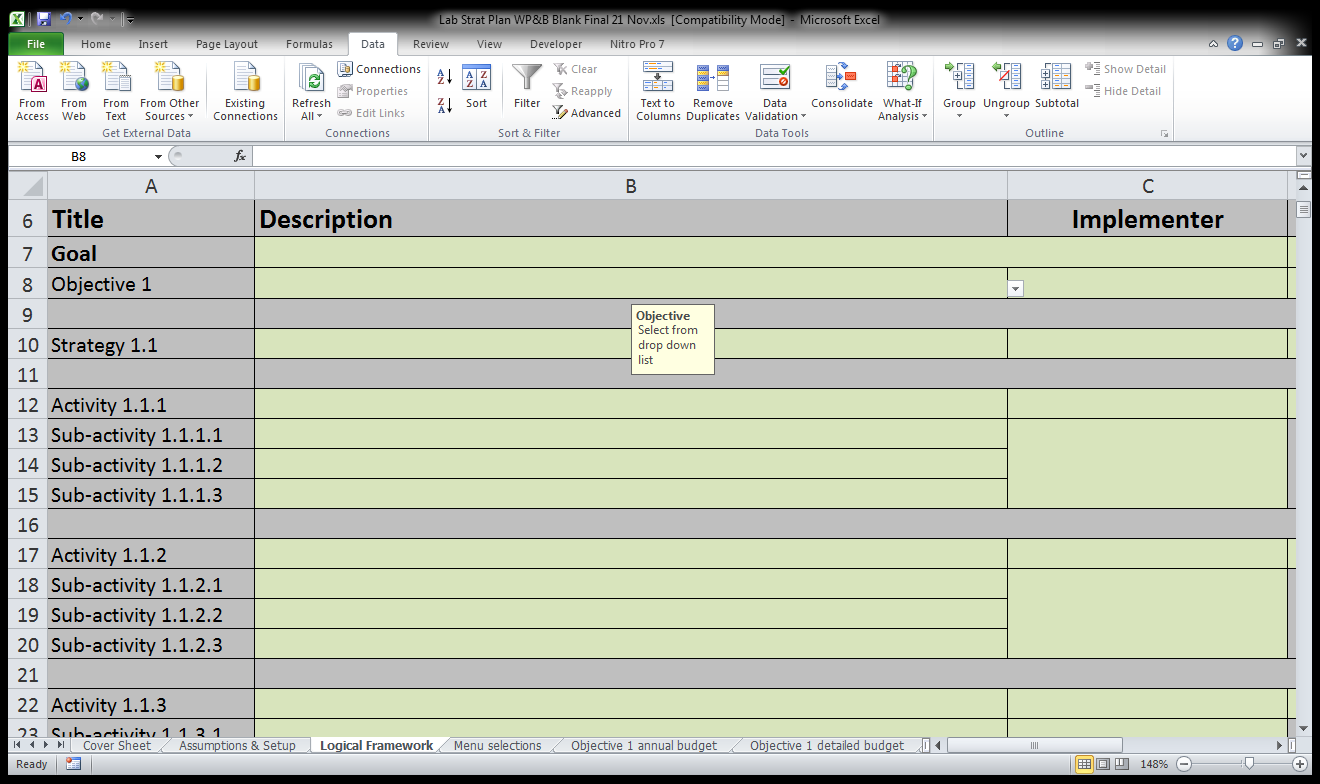
|  |  |
| --- | --- |
| **Strategy 1.1** | **Strengthen laboratory infrastructure including biosafety** |
| *Activity 1.1.1* |  |
| Sub-activity 1.1.1.1 |  |
| Sub-activity 1.1.1.2 |  |
| **Strategy 1.2** | **Improve laboratory human resource development** |
| *Activity 1.2.1* |  |
| Sub-activity 1.2.1.1 |  |
| Sub-activity 1.2.1.2 |  |
| Sub-activity 1.2.1.3 |  |
| **Strategy 1.3** | **Develop and maintain laboratory quality management systems** |
| *Activity 1.3.1* |  |
| Sub-activity 1.3.1.1 |  |
| Sub-activity 1.3.1.2 |  |
| **Strategy 1.4** | **Enhance management of laboratory commodities and supplies including equipment validation and maintenance** |
| *Activity 1.4.1* |  |
| Sub-activity 1.4.1.1 |  |
| Sub-activity 1.4.1.2 |  |
| **Strategy 1.5** | **Fortify specimen transport and referral mechanisms** |
| *Activity 1.5.1* |  |
| Sub-activity 1.5.1.1 |  |
| Sub-activity 1.5.1.2 |  |
| **Strategy 1.6** | **Improve laboratory information and data management systems** |
| *Activity 1.6.1* |  |
| Sub-activity 1.6.1.1 |  |
| Sub-activity 1.6.1.2 |  |
| **Strategy 1.7** | **Establish a laboratory Regulatory framework** |
| *Activity 1.7.1* |  |
| Sub-activity 1.7.1.1 |  |
| Sub-activity 1.7.1.2 |  |
| **Strategy 1.8** | **Develop Operations Research capacity** |
| *Activity 1.8.1* |  |
| Sub-activity 1.8.1.1 |  |
| Sub-activity 1.8.1.2 |  |

Objective 4: Establish laboratory quality management systems

|  |  |
| --- | --- |
| **Strategy 1.1** | **Strengthen laboratory infrastructure including biosafety** |
| *Activity 1.1.1* |  |
| Sub-activity 1.1.1.1 |  |
| Sub-activity 1.1.1.2 |  |
| **Strategy 1.2** | **Improve laboratory human resource development** |
| *Activity 1.2.1* |  |
| Sub-activity 1.2.1.1 |  |
| Sub-activity 1.2.1.2 |  |
| Sub-activity 1.2.1.3 |  |
| **Strategy 1.3** | **Develop and maintain laboratory quality management systems** |
| *Activity 1.3.1* |  |
| Sub-activity 1.3.1.1 |  |
| Sub-activity 1.3.1.2 |  |
| **Strategy 1.4** | **Enhance management of laboratory commodities and supplies including equipment validation and maintenance** |
| *Activity 1.4.1* |  |
| Sub-activity 1.4.1.1 |  |
| Sub-activity 1.4.1.2 |  |
| **Strategy 1.5** | **Fortify specimen transport and referral mechanisms** |
| *Activity 1.5.1* |  |
| Sub-activity 1.5.1.1 |  |
| Sub-activity 1.5.1.2 |  |
| **Strategy 1.6** | **Improve laboratory information and data management systems** |
| *Activity 1.6.1* |  |
| Sub-activity 1.6.1.1 |  |
| Sub-activity 1.6.1.2 |  |
| **Strategy 1.7** | **Establish a laboratory Regulatory framework** |
| *Activity 1.7.1* |  |
| Sub-activity 1.7.1.1 |  |
| Sub-activity 1.7.1.2 |  |
| **Strategy 1.8** | **Develop Operations Research capacity** |
| *Activity 1.8.1* |  |
| Sub-activity 1.8.1.1 |  |
| Sub-activity 1.8.1.2 |  |

**Exercise 5d: Prioritizing main and sub- activities by strategies within STOP TB objectives**

With the Excel tool, Insert activities and sub-activities into the logical frame work



Objective 1.

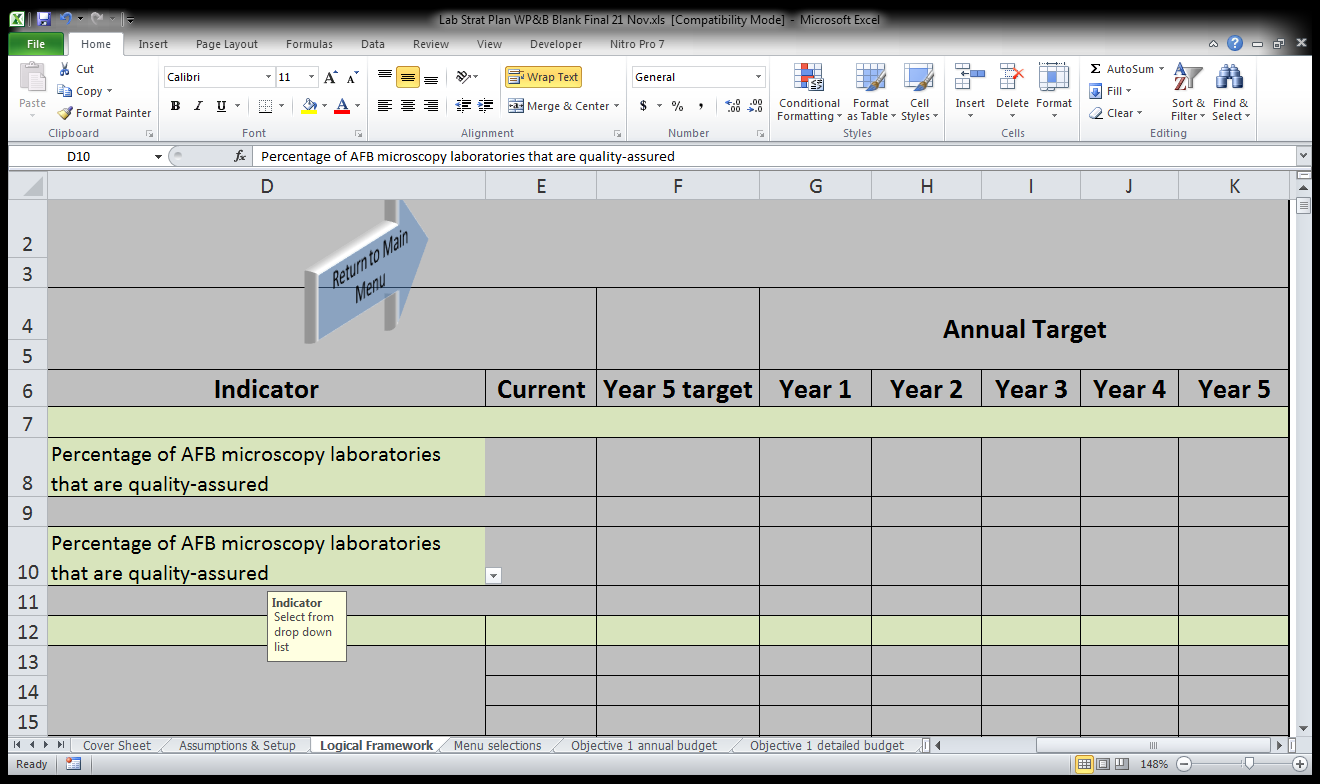
|  |  |
| --- | --- |
| **Strategy 1.1** |  |
| *Activity 1.1.1* |  |
| Sub-activity 1.1.1.1 |  |
| Sub-activity 1.1.1.2 |  |
|  |  |
| **Strategy 1.2** |  |
| *Activity 1.2.1* |  |
| Sub-activity 1.2.1.1 |  |
| Sub-activity 1.2.1.2 |  |
| Sub-activity 1.2.1.3 |  |
|  |  |
| **Strategy 1.3** |  |
| *Activity 1.3.1* |  |
| Sub-activity 1.3.1.1 |  |
| Sub-activity 1.3.1.2 |  |
|  |  |
| **Strategy 1.4** |  |
| *Activity 1.4.1* |  |
| Sub-activity 1.4.1.1 |  |
| Sub-activity 1.4.1.2 |  |
|  |  |
| **Strategy 1.5** |  |
| *Activity 1.5.1* |  |
| Sub-activity 1.5.1.1 |  |
| Sub-activity 1.5.1.2 |  |
|  |  |
| **Strategy 1.6** |  |
| *Activity 1.6.1* |  |
| Sub-activity 1.6.1.1 |  |
| Sub-activity 1.6.1.2 |  |
|  |  |
| **Strategy 1.7** |  |
| *Activity 1.7.1* |  |
| Sub-activity 1.7.1.1 |  |
| Sub-activity 1.7.1.2 |  |

# Chapter 6: Identifying indicators and targets in a monitoring and evaluation (M&E) framework-Participants Manual

**Exercise 6a: Developing M&E indicators for activities within STOP TB objectives**

**Exercise 6b: Developing M&E targets for activities within STOP TB objectives**

With the excel tool (further instruction found in Annex I of this facilitators manual): Input implementers, indicators, write current status and add targets.



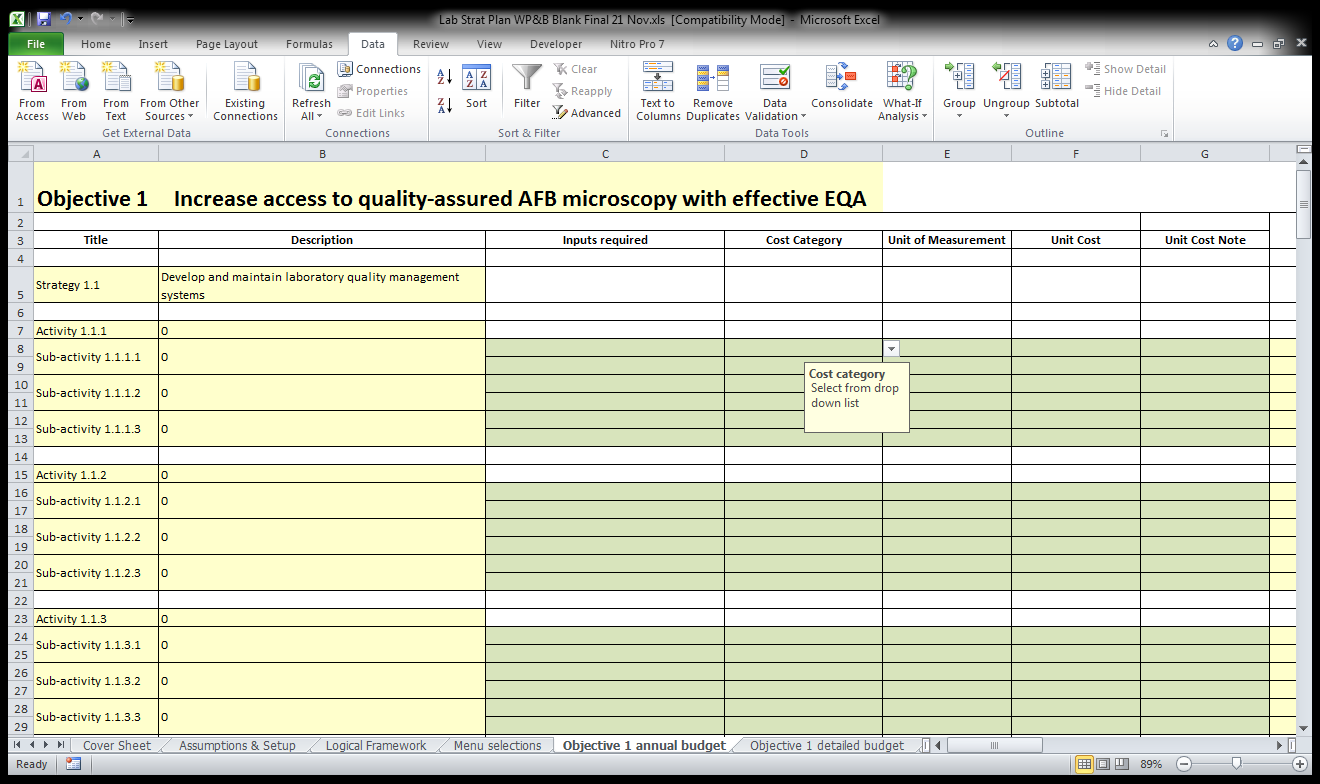
Blank template to work from below should you choose to not work in the Excel tool which is recommended.

Objective 1:

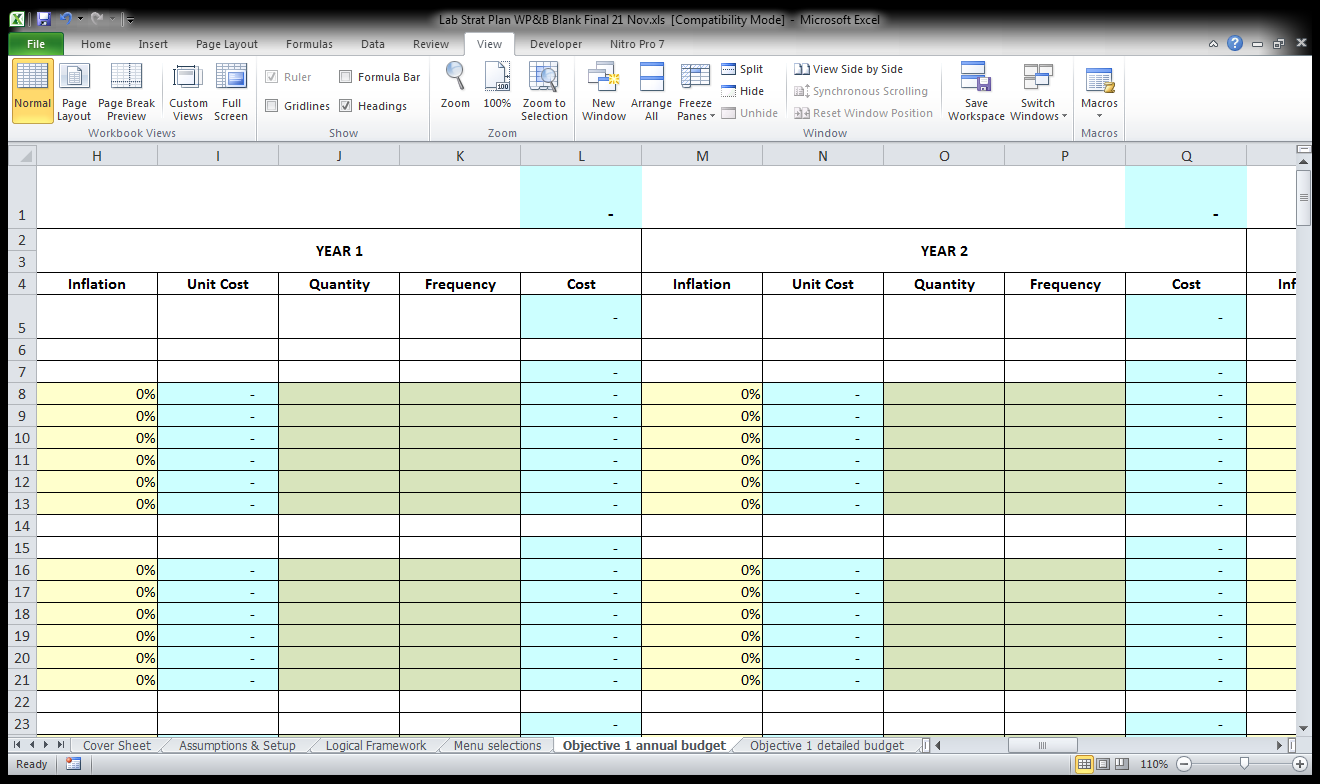
|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description** | **Indicators** | **Targets** |
| **Strategy 1.1** |  |  |  |
| *Activity 1.1.1* |  |  |  |
| Sub-activity 1.1.1.1 |  |  |  |
| Sub-activity 1.1.1.2 |  |  |  |
|  |  |  |  |
| **Strategy 1.2** |  |  |  |
| *Activity 1.2.1* |  |  |  |
| Sub-activity 1.2.1.1 |  |  |  |
| Sub-activity 1.2.1.2 |  |  |  |
| Sub-activity 1.2.1.3 |  |  |  |
|  |  |  |  |
| **Strategy 1.3** |  |  |  |
| *Activity 1.3.1* |  |  |  |
| Sub-activity 1.3.1.1 |  |  |  |
| Sub-activity 1.3.1.2 |  |  |  |
|  |  |  |  |
| **Strategy 1.4** |  |  |  |
| *Activity 1.4.1* |  |  |  |
| Sub-activity 1.4.1.1 |  |  |  |
| Sub-activity 1.4.1.2 |  |  |  |
|  |  |  |  |
| **Strategy 1.5** |  |  |  |
| *Activity 1.5.1* |  |  |  |
| Sub-activity 1.5.1.1 |  |  |  |
| Sub-activity 1.5.1.2 |  |  |  |
|  |  |  |  |
| **Strategy 1.6** |  |  |  |
| *Activity 1.6.1* |  |  |  |
| Sub-activity 1.6.1.1 |  |  |  |
| Sub-activity 1.6.1.2 |  |  |  |

# Chapter 7: Develop a TB laboratory plan work plan and budget-Participants manual

**Exercise 7a: Work plan and budget-costing (sub-) activities**

Input into the annual budget sheet. Define unit of measurement, and unit costs and quantities 

Add quantities and the frequency these of quantities in respective column



# Chapter 8: Putting it all together-Participants manual

**Exercise 8a: Putting it all together**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Check if completed √** | **Component** | | **What needs to be done to complete this section?** | **Who does this?**  **Organization/person** | **Due date** |
|  | Title page with appropriate logos and date. | |  |  |  |
|  | **I.** Table of contents | |  |  |  |
|  | **II.** Foreword | |  |  |  |
|  | **III.** Acknowledgment of contributors | |  |  |  |
|  | **IV.** Executive summary highlighting the key elements for an overview of the TB-specific Plan | |  |  |  |
|  | **V.** Abbreviations | |  |  |  |
|  | **VI.** Mission and vision statement [derived from Exercises 3a-3b] | |  |  |  |
|  | **VII.** Situational analysis including: | |  |  |  |
|  | Narrative of sections 4.1-4.13 [derived from Exercise 4a] |  |  |  |
|  | **A-B.** TB specific contextual analysis |  |  |  |
|  | **C.** TB specific tests currently available and coverage |  |  |  |
|  | **D.** Structure of the laboratory network of TB diagnostics |  |  |  |
|  | **E.** Infrastructure of the laboratory network of TB diagnostics |  |  |  |
|  | **F.** Human resources for the TB laboratory network |  |  |  |
|  | **G.** Equipment maintenance and validation for TB laboratory equipment |  |  |  |
|  | **H.** Quality management systems of TB laboratory network |  |  |  |
|  | **I.** Management of laboratory commodities and supplies for the TB laboratory network |  |  |  |
|  | **J.** Laboratory information and data management for the TB laboratory network |  |  |  |
|  | **K.** Sample transport and referral system for the TB laboratory network |  |  |  |
|  | **L.** Operational research within the TB laboratory network |  |  |  |
|  | **M.** Legal policy and review for TB laboratory network |  |  |  |
|  | **N.** Financing for the TB laboratory services |  |  |  |
|  | Strengths, weaknesses, opportunities and threats (SWOT) of TB laboratory network [derived from Exercise 4b] |  |  |  |
|  | Situational analysis framework by key challenges and specific areas with potential solutions [derived from Exercise 4c] |  |  |  |
|  | **VIII.** Defined Priority targets, Areas, strategies, main activities and sub-activities of the TB laboratory Plan [derived from Exercises 5a-5d] | |  |  |  |
|  | **IX.** Monitoring and evaluation framework of TB-specific Plan [derived from Exercises 6a-6b] | |  |  |  |
|  | **X.** Work plan and budget of TB-specific Plan [Exercise 7a] | |  |  |  |
|  | **XII**. References | |  |  |  |
|  | **XIII.** Annexes | |  |  |  |
| **Check if completed √** | **Component** | | **What needs to be done to complete this section?** | **Who does this?** | **Due date** |
|  | Editing for consistency of terms within document | |  |  |  |
|  | Editing for grammar and language | |  |  |  |
|  | Spell-check | |  |  |  |
|  | Cross-check for consistency of terms (language and technical), harmonization, between this TB-specific Plan and the TB-specific Plan mission | |  |  |  |
|  | Cross-check for consistency of terms (language and technical), harmonization, between this TB-specific Plan and the NTP strategic plan including activities, indicators and targets | |  |  |  |
|  | Cross-check for consistency of terms (language and technical), harmonization, between this TB-specific Plan and the NHL strategic plan including activities, indicators and targets | |  |  |  |
|  | Endorsement by an appropriate official with forward (executive summary) | |  |  |  |
|  | Printing | |  |  |  |
|  | Distribution | |  |  |  |