Le Fonds mondial
De lutte contre le sida, tuberculose et le paludisme

STANDARD CONCEPT NOTE

Investing for impact against tuberculosis

A concept note outlines the reasons for Global Fund investment. Each concept note should describe a strategy, supported by technical data that shows why this approach will be effective. Guided by a national health strategy and a national disease strategic plan, it prioritizes a country's needs within a broader context. Further, it describes how implementation of the resulting grants can maximize the impact of the investment, by reaching the greatest number of people and by achieving the greatest possible effect on their health.

A concept note is divided into the following sections:

Section 1: A description of the country's epidemiological situation, including health systems and barriers to access, as well as the national response.

Section 2: Information on the national funding landscape and sustainability.

Section 3: A funding request to the Global Fund, including a programmatic gap analysis, rationale and description, and modular template.

Section 4: Implementation arrangements and risk assessment.

IMPORTANT NOTE: ***This template and its main tables may be slightly amended following decisions that are expected in early 2014.***

Applicants should refer to the Standard Concept Note Instructions to complete this template.

SUMMARY INFORMATION			
Applicant Information			
Country	**Côte d'Ivoire**	**Component**	**TB**
Funding Request Start Date	**1 January 2016**	**Funding Request End Date**	**31 December 2017**
Principal Recipient(s)	**National Tuberculosis Control Program (NTCP) – public PR** **National Alliance for AIDS Control in Côte d'Ivoire – community PR**		

Funding Request Summary Table

A funding request summary table will be automatically generated in the online grant management platform based on the information presented in the programmatic gap table and modular templates.

SECTION 1: COUNTRY CONTEXT

This section requests information on the country context, including the disease epidemiology, the health systems and community systems setting, and the human rights situation. This description is critical for justifying the choice of appropriate interventions.

1.1 Country Disease, Health and Community Systems Context

With reference to the latest available epidemiological information, in addition to the portfolio analysis provided by the Global Fund, highlight:

a. The current and evolving epidemiology of the disease(s) and any significant geographic variations in disease risk or prevalence.
b. Key populations that may have disproportionately low access to prevention and treatment services (and for HIV and TB, the availability of care and support services), and the contributing factors to this inequality.
c. Key human rights barriers and gender inequalities that may impede access to health services.
d. The health systems and community systems context in the country, including any constraints.

Côte d'Ivoire is a West African country covering an area of 322,462 km². The country is divided into 14 districts of which two are autonomous (Abidjan and Yamoussoukro), 31 administrative regions, 95 departments, 498 administrative departments, 718 communes and more than 8,500 villages.[1]
In 2014 the population was 22,671,331, of which 50.2 percent were living in rural areas and 51.7 percent were male.[2] This is a young population (41.5 percent under the age of 15), and mainly a working population (55.9 percent aged 15-64 years). The annual demographic growth rate[2] is estimated at 2.6 percent, mortality at 9.7 deaths per 1,000 inhabitants and life expectancy at birth at 56 years.[3]
The Human Development Index ranks Côte d'Ivoire 168 of 187 countries. It is a low-income country with a gross national product of US$ 1,593 per inhabitant.[3] In 2008, an estimated 48.9 percent of households were living below the poverty level, with this rate falling to 42.7 percent in 2013.[4]

a.
TB is a major public health problem in Côte d'Ivoire. WHO estimates suggest that in 2013 there was a prevalence of around 44,000 cases of TB, or 215 cases per 100,000 inhabitants, and an incidence of 35,000 cases, or 170 new cases of TB per 100,000 inhabitants. WHO estimates that there were 20 deaths caused by TB per 100,000 inhabitants in the same year.[5]

Recorded incidence of TB cases
The number of recorded cases of tuberculosis, all forms (TBAF) rose from 7,446 in 1990, of which 5,189 (70 percent) were cases of smear-positive pulmonary tuberculosis (PTB+), to 25,299 in 2013, of which 15,241 cases (60.2 percent) were PTB+ (Figure 1). On average, 805 additional cases of TBAF were recorded each year during this period, an increase of 5.6 percent per year. For PTB+, 433 additional cases were recorded each year, an increase of 4.9 percent per year.

[1] Data provided by the National Committee for Remote Sensing and Geographic Information (CNTIG), Decree N°2011-263 of 28 September 2011 on national territorial planning and Decree n° 2012-612 of 4 July 2012 on creating the region of Moronou.
[2] Preliminary results of the May 2014 General Census of Population and Housing (GCPH).

[3] 2013 UNDP Global Human Development Report.
[4] Living Standards Measurement Survey (LSMS), 2008
[5] WHO Global TB Report 2014.

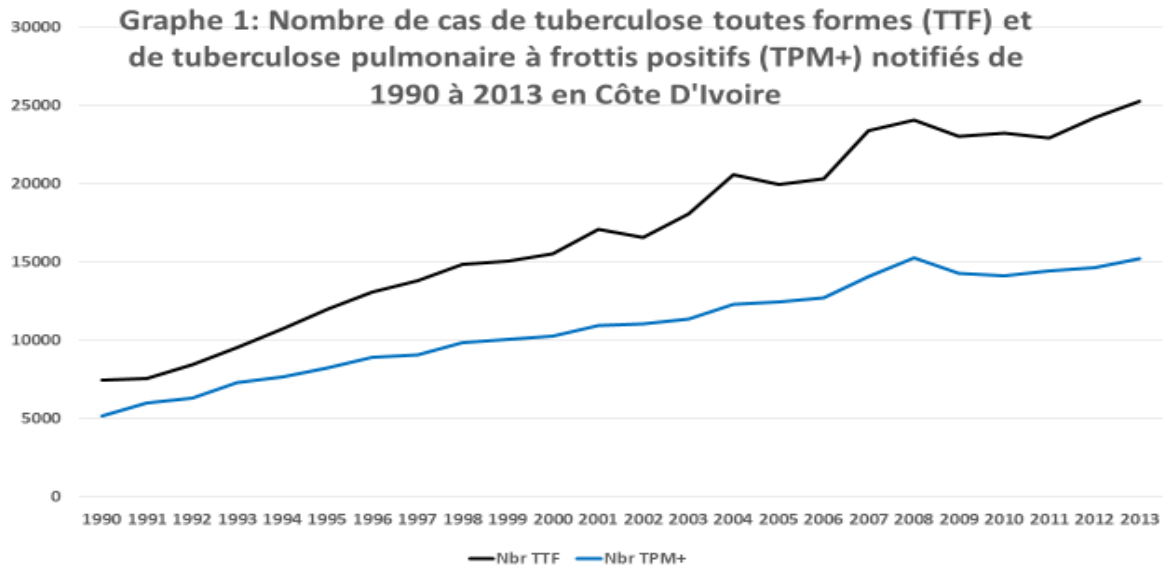


Figure 1: Number of cases of all forms of tuberculosis (TBAF) and smear-positive pulmonary tuberculosis (PTB +) recorded from 1990 to 2013 in Côte d'Ivoire

Table: TBAF (black) PTB+ (blue)

Between 1990 and 2013, the notified incidence of TBAF rose from 64 new cases to 112 new cases per 100,000 inhabitants, while the incidence of PTB+ rose from 45 new cases to 69 per 100,000 inhabitants.[6] On average, the incidence of TBAF increased by 2.4 percent per year and that of PTB+ by 1.7 percent per year. However, this rising trend slowed from 1995, and was only 1.2 percent per year for notified incidence of TBAF and 0.3 percent per year for PTB+.

Distribution according to gender and age group

The data collected by the National Tuberculosis Control Program (NTCP) between 2000 and 2013 show that the number of new cases of PTB+ among males was from 40 to 65 percent higher than the number of cases among females. The male/female ratio was, on average, 1.7 in 2014. Between these two years, the number of recorded cases of PTB+ increased by an average of 275 cases per year among males (an increase of 4.0 percent per year) and 145 cases per year among females (an increase of 3.6 percent per year). The notified incidence of PTB+ was consistently higher among males than among females (Figure 2). The ratio between recorded incidence in males and in females averaged 1.43 between 2000 and 2013.

[6]After the results of the 2014 national population census in Côte d'Ivoire, which records a population of 22,671,331 and a demographic growth rate of 2.6 percent a year, it was concluded that the population of Côte d'Ivoire was 22,096,814 in 2013. This was the population figure used to calculate detection rates recorded instead of the estimated figure of 24,596,778 for 2013, prior to the 2014 census, Preliminary Results of the General Census of Population and Housing (GCPH) in May 2014.

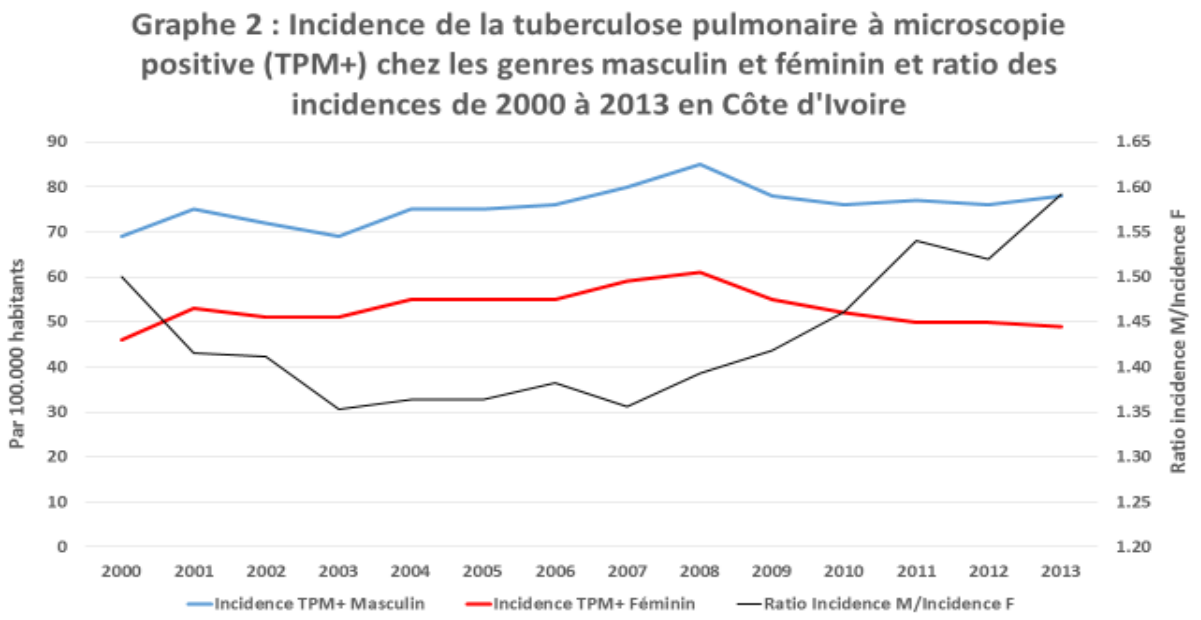


Figure 2: incidence of smear-positive pulmonary tuberculosis (PTB+) among the male and female population and the ratio of incidences from 2000 to 2013 in Côte d'Ivoire.

Table :
Y axis left: Per 100,000 inhabitants
Y axis right: Ratio of M/F Incidence
Legend: Incidence of Male PTB+ Incidence of Female PTB+ Ratio M/F Incidence

The number of PTB+ cases detected between 2000 and 2013 increased in practically every age group (Figure 3), but the highest number of additional cases per year was detected in the 25-34 age group, regardless of gender. The highest rates of annual increase were observed in the groups aged under 15 years (8.4 percent per year) and over 65 years (6.9 percent per year). The proportional distribution of cases of PTB+ detected per age group did not change significantly between 2000 and 2013. On average, 2.7 percent of these cases were detected in the group aged under 15 years, 76 percent in the 15-44 age group and around 90 percent in the under 55 age group. Between 2000 and 2013, the number of cases detected in those aged under 15 years showed no sign of decreasing, while the number for the over 65 age group remained practically unchanged (Figure 4). The average age of patients with PTB+ is around 34 years; this remained virtually stable between 2000 and 2013 (Figure 5). The highest incidence of PTB+ was observed in the 25-34 age group, both among men (169 per 100,000 in 2013) and among women (99 per 100,000 in 2013) (Figure 6).

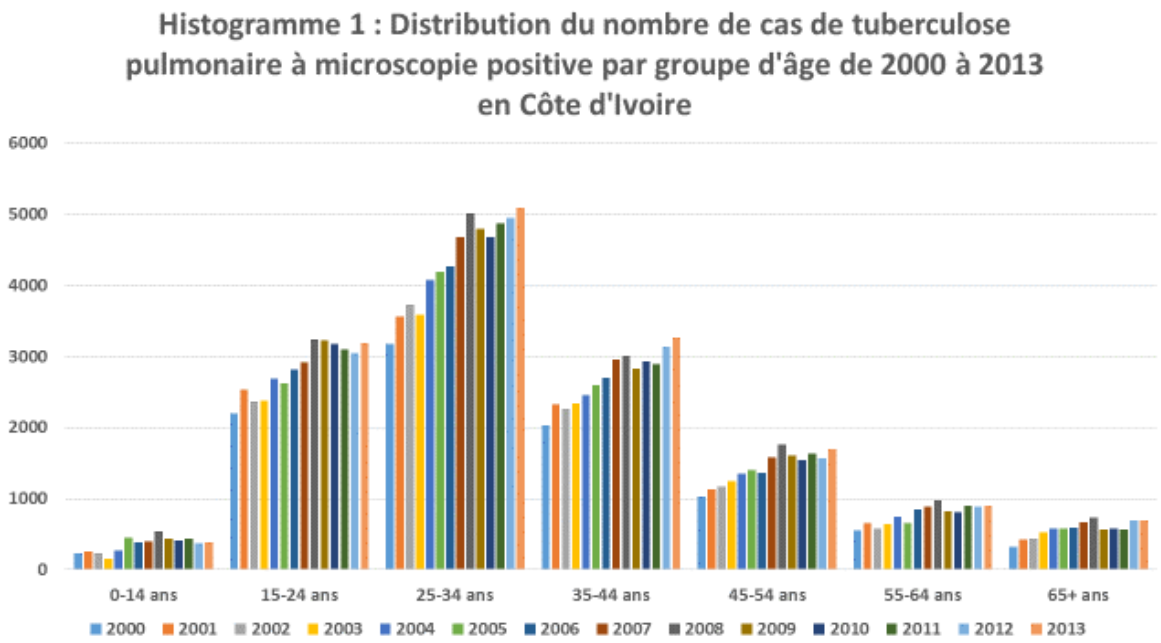


Figure 3: Distribution of smear-positive cases of pulmonary tuberculosis per age group from 2000 to 2013 in Côte d'Ivoire

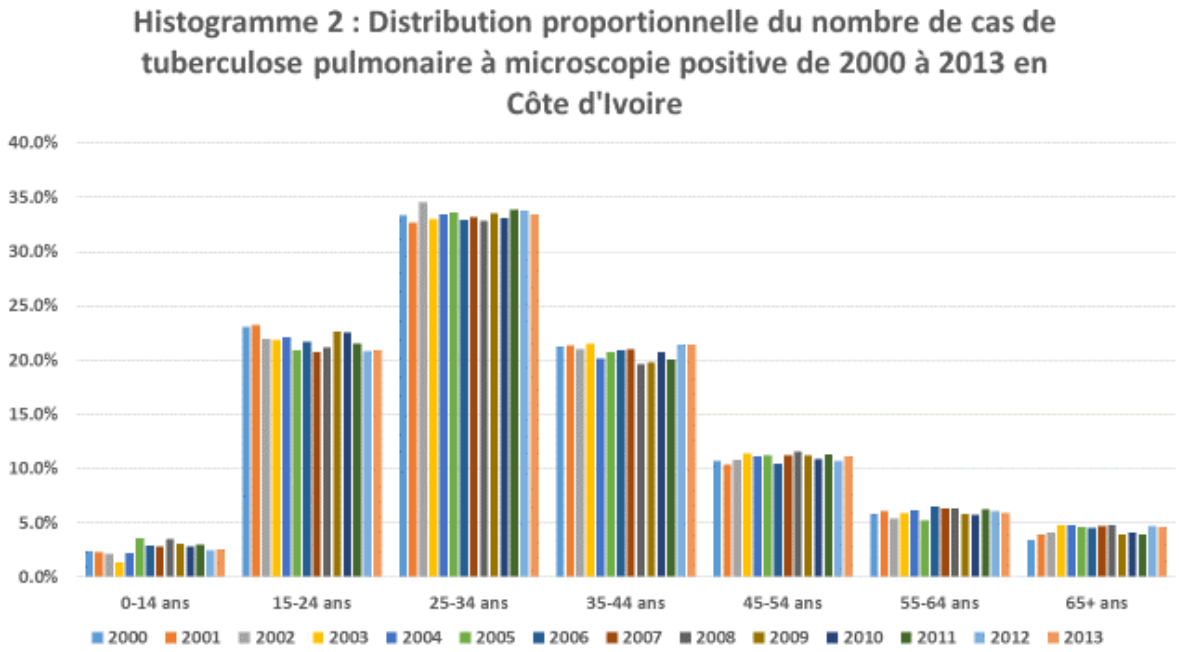


Figure 4: Proportional distribution of smear-positive cases of pulmonary tuberculosis from 2000 to 2013 in Côte d'Ivoire.

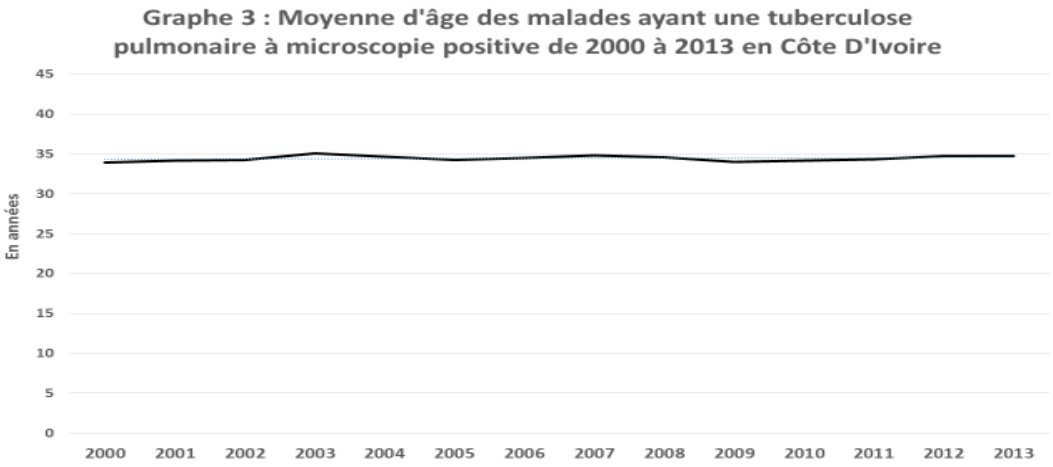


Figure 5: Average age of patients with smear-positive pulmonary tuberculosis from 2000 to 2013 in Côte d'Ivoire.

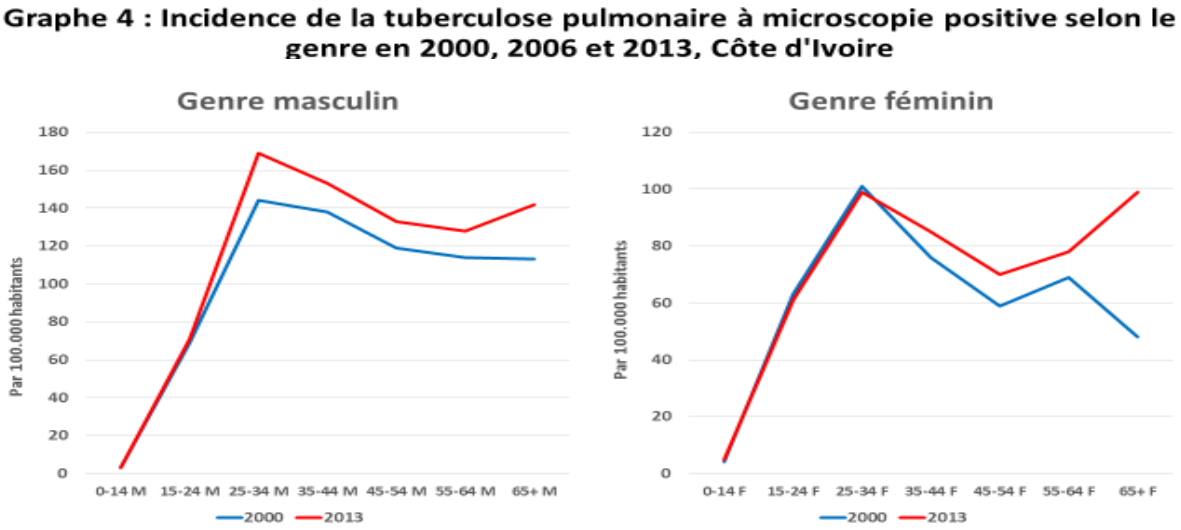


Figure 6: Incidence of smear-positive pulmonary TB in Côte d'Ivoire, by gender, 2000 and 2013

Geographic distribution

NTCP figures for the years 2007 to 2013 indicate that 51 to 60 percent of cases of TBAF are recorded in Abidjan and its region where incidence is 3.5 to 4.5 times higher than in other regions of Côte d'Ivoire (Figure 7). These same figures show that 47 to 51 percent of cases of PTB+ are detected in Abidjan and its region; there the incidence of PTB+ is 2.7 to 3.3 times higher than in other regions (Figure 7).

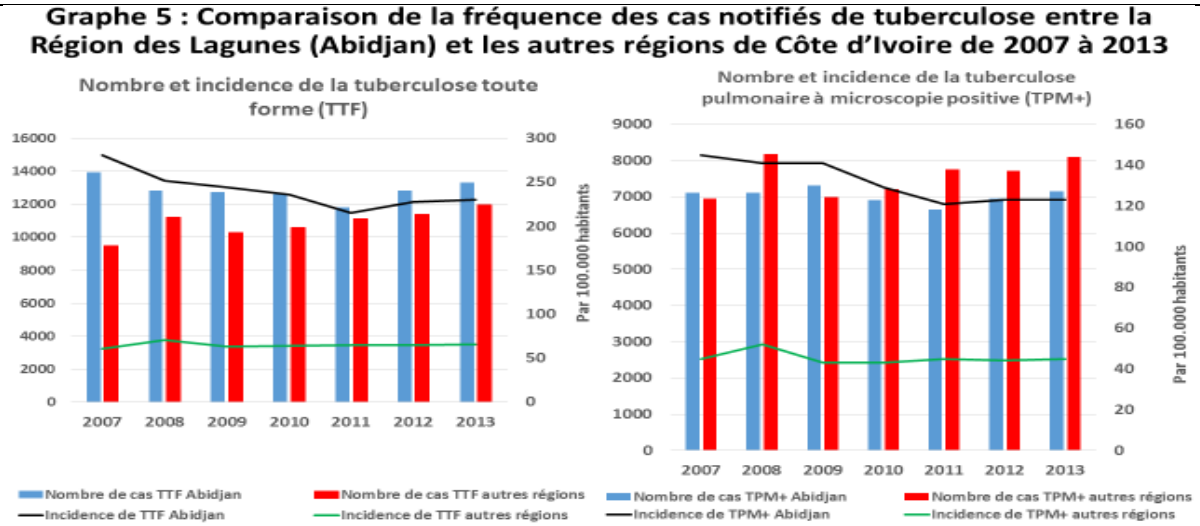


Figure 7: Comparison of frequency of cases of tuberculosis detected between the Lakes Region (Abidjan) and other regions of Côte d'Ivoire from 2007 to 2013

[left table] Number and incidence of all forms of tuberculosis (TBAF)
[right table] Number and incidence of smear-positive pulmonary tuberculosis (PBT+)

{legend, left to right]
Number of TBAF cases Abidjan
Number of TBAF cases other regions
Number of PTB+ cases Abidjan
Number of PTB+ cases other regions

Incidence of TBAF cases Abidjan
Incidence of TBAF cases other regions
Incidence of PTB+ cases Abidjan
Incidence of PTB+ cases other regions

Y axis: per 100,000 inhabitants

Annex 1 shows the breakdown by region of the data collected between 2007 and 2013. The four regions (Bounkani-Gontougo, Hambol, Poro-Tchologo-Bagoue and Worodougou-Bere) with the lowest notification rates (fewer than 50 cases per 100,000 inhabitants) are the least populated regions and those with HIV prevalence below the national average. The actual TB burden by region is not known; this should be studied in more depth. It is clear that the notification of cases by region in no way reflects the reality of TB dynamics. However, even regions which have a low TB notification rate, for a lower population than other regions, should not discount the possibility of under-reporting. This should be investigated more fully and addressed.

It should be noted that the data on TB-related morbidity in Côte d'Ivoire are taken from WHO estimates and that no national survey on TB prevalence or mortality has been carried out to date. Nor has any operational research been carried out into the determinants of TB in Côte d'Ivoire. The data available on TB epidemiology are those generated by the NTCP's information system, the aims of which are more programmatic than epidemiological. Like all data from routine surveillance systems, they also carry some degree of bias.

TB/HIV infection

Côte d'Ivoire is experiencing a mixed epidemic of HIV/AIDS infection (generalized and concentrated). According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), there are an estimated 460,000 people living with HIV (PLHIV) throughout the country.[7] An estimated 22,000 people died due to HIV/AIDS infection in 2012. Prevalence of the infection in the population aged 15-49 fell from 4.7 percent

[7] UNAIDS 2014 Report.

in 2005[8] to 3.7 percent in 2012.[9] The rate is 4.6 percent among women and 2.7 percent among men.[10] Abidjan and its region have the highest prevalence in the country (5.1 percent) NTCP data from 2010 to 2014 show that on average 25 percent of TB patients tested for HIV are positive. The same data show that this prevalence of HIV-positive cases is higher among patients with TB detected in Abidjan and its region (27 to 31 percent) compared to cases detected in other regions (16 to 21 percent).

Other determinants of TB
To date, there are no well-established data in Côte d'Ivoire on the link between TB and its known or unknown determinants, other than HIV. There is a clear need for studies which give a more precise indication of the main determinants of TB in the country. This will make it easier to identify and implement the most appropriate interventions for TB control.

Multidrug-resistant tuberculosis (MDR-TB)
According to recent WHO estimates, there is a 2.5 percent prevalence of MDR-TB among patients with TB who have never received any anti-TB drugs, and 13 percent among those who have been treated previously for TB. As a result, in 2014, there were around 428 cases of MDR-TB among newly detected cases of PTB and 179 among registered patients who had already been treated for TB.

Conclusion: There is high prevalence of TB among the population of Côte d'Ivoire. It affects males significantly more than females. Around three quarters of recorded cases are in young adults in the 15-44 age group. More than half of cases are recorded in Abidjan and its region, where HIV prevalence is the highest in the country. The NTCP data show no decrease in TB prevalence among children and adolescents (below15 years of age) and no obvious signs of increase in its prevalence among those aged 65 years and over. The average age of TB patients has also remained practically unchanged over the past 14 years. This strongly suggests that there is no decreasing trend in TB transmission among the population of Côte d'Ivoire. However, there are limitations to the existing data, as the estimate for TB-related morbidity is based on the WHO estimate and there has been no actual estimation to date of prevalence or mortality among the population. The differences in TB prevalence observed between regions should be investigated fully and explained through operational research.

b.
1. Populations with difficulty in accessing health services
Although most districts have at least one health center that provides microscopy testing and treatment for TB (testing and treatment centers – TTCs), the number of TTCs (160) is still too low to cover the needs of the whole population. The ratio is only one TTC/laboratory for around 145,000 people. Some districts, particularly those in the urban and suburban areas of Abidjan and Yamoussoukro, have one TTC for 400,000 to more than 500,000 inhabitants. In districts of Abidjan from 300 to almost 500 new cases of TB per 100,000 inhabitants were detected in 2013. These figures strongly suggest that the population in these districts has difficulty in accessing TB control services, particularly those services that diagnose the disease. These districts include a large number of urban or suburban areas with high poverty and a shortage or absence of basic public services, including health services. For example, in Abidjan, where more than 50 percent of the TB cases in Côte d'Ivoire are recorded, 52 districts have been identified and classified as being poorly served by basic social services, according to the ministry for planning and development. The harbor town of San Pedro has the largest slum in West Africa, which is home to 80 percent of the town's population.[10]
The populations that have difficulty accessing TB control services, particularly in poor urban and suburban areas and where there is a high rate of TB-related morbidity, would be those targeted as priorities within the context of this concept note.

2. People living with HIV (PLHIV)
Côte d'Ivoire is one of the countries most affected by the HIV/AIDS epidemic in the West African Sub-region. The epidemic there is generalized and concentrated. The Demographic and Health Survey -

[8] Ministry of Health and AIDS Prevention (MSLS) and National Institute of Statistics. Survey on AIDS indicators; 2006 edition.
[9] Ministry of Health and AIDS Prevention (MSLS), National Institute of Statistics and Ministry of Planning and Development. Demographic and health survey and multiple indicators 2011-2012; 2013 edition.
[10] http://www.panapress.com/Le-Bardot-de-San-Pedro,-le-quartier-de-tous-les-dangers--12-589841-145-lang3-index.html.

Multiple Indicator Cluster Survey (DHS/MICS) 2011-2012 indicates a 3.7 percent prevalence of HIV infection among the population aged 15-49 years.[9] UNAIDS estimates the number of PLHIV to be 460,000, among them 250,000 women aged 15 or more and 42,000 children under 15 years.[7]
AIDS control services are provided within the framework of the National AIDS Control Program (NACP). Significant efforts have been made to provide these services to the whole population. Although there are signs suggesting a slight downward trend in HIV-related morbidity over recent years, it remains high, especially in Abidjan where prevalence is 5.1 percent; it is even recognized to have risen in the central north and northwest regions. It is highly likely that HIV infection is a significant contributing factor to TB-related morbidity in Côte d'Ivoire, given that on average 25 percent of TB cases recorded since 2010 also have HIV co-infection. It should also be reiterated that there are 460,000 PLHIV across the country who are at high risk of developing TB.

3. Contacts of TB patients

Contacts of TB patients are a high-risk group for TB. The TB control strategy for Côte d'Ivoire includes an intervention to provide them with systematic screening. However, there is only sporadic implementation of this intervention, due to a lack of clear guidelines on: i) a definition of the index case around which detection enquiries would have to be made, ii) a definition of the contacts who should be tested systematically for TB, iii) the algorithm which should be used, iv) the role of health professionals and community workers in conducting systematic detection enquiries and v) indicators that should be used to monitor how detection measures are used around the index case and to assess the results of these measures.

4. Miners exposed to silica dust

It is known that miners exposed to silica dust are at significant risk of developing silicosis and consequently TB. WHO recommends active screening for TB among this population.[11] The number of people belonging to this category of high-risk group in Côte d'Ivoire is not clearly established. However, there are miners' associations with organized health services, with which the NTCP could undertake activities for systematic and active screening for TB.

5. Children and adolescents

NTCP data for the period 2008 to 2013 show that children and adolescents (under the age of 15) account for only 5 percent of all cases of TBAF detected in Côte d'Ivoire. Due to the paucibacilliary nature of TB in this age group, diagnosis of the disease is based on essentially clinical arguments for a large number of patients. In 2013, 58 percent of the 1,243 cases of TB in those aged under 15 years recorded throughout the country were identified in Abidjan and its region. Children and adolescents represent slightly more than 5 percent of cases of TB recorded in Abidjan and its region, compared to 3 percent and less in some regions, such as Agneby, Nzi Comoé, Worodougou or Zanzan. Given the epidemiological characteristics of TB in Côte d'Ivoire (highly unlikely decrease in transmission of the TB bacillus among the population) and the low proportion of children and adolescents among TB cases notified at the national level (5 percent), it is highly probable that TB is under-diagnosed in those aged under 15 years. This is due to the shortage of guidelines, training and tools available to enable diagnosis of TB in children.
There is insufficient use of isoniazid preventive therapy (IPT) for children who have been exposed to an index case (e.g. a case of PTB+) and in whom systematic screening has not identified active TB. In addition, the dose of 10mg/kg/day recommended by WHO is not always observed.

6. Prisoners

There are 34 prisons, known as detention and correction centers (MACs), in Côte d'Ivoire. Currently they can hold 6,989 detainees. On 28 February 2015 the prison population was 10,396; that is, an excess population of 33 percent. Around 40 percent of detainees are held at the MAC in Abidjan. To provide health care in these detention and correction centers, a framework document on the national health policy in detention centers was prepared jointly by the Ministry of Health and the Ministry of Justice and Civil Liberties and then endorsed by the Prime Minister.[12] In 2014, the health units at 22 out of the 34 MACs had incorporated TB control activities into their services. A TTC (with a microscopy laboratory) has been established at the MAC in Abidjan; it provides bacteriological diagnosis and treatment services and

[11] http://apps.who.int/iris/bitstream/10665/84971/1/9789241548601_eng.pdf
[12] Ministry of Justice and Human Rights and Ministry of Health and Public Hygiene. Framework document: National Health Policy in the Prison System. May 2010 edition.

submits quarterly reports to the NTCP. Between 2008 and 2013, there were 118 cases of TBAF, 67 percent of PTB+ cases being detected through the network of health units in these detention centers. Directly observed treatment (DOT) is ensured every day thanks to the involvement of peer educators. Prisoners with TB receive nutritional support throughout their treatment.
Although there is this official framework for collaboration between the Ministry of Health and AIDS Prevention (MSLS) and the Ministry of Justice and Civil Liberties, approval for implementing the national policy for collaboration between the NTCP, the Department for Prison Administration (DAP) and the network of detention and correction centers, is about to be signed by the two ministries. There are frequent delays in diagnosing TB in most of these centers. There are no measures in place for monitoring detainees who are released although still under treatment for TB. Moreover, it is not always easy to ensure the treatment and surveillance of detainee patients who are transferred from one detention center to another. An important fact is that 12 detention centers have yet to be integrated into the collaboration process with the NTCP.

7. Women

NTCP data clearly indicate that women are less affected by TB than men. However, women often receive less education, have less financial independence and are more affected by poverty in vulnerable areas. Women are more affected than men by difficulty in accessing health services; it is recognized that they frequently consult the nearest care providers, who tend to be traditional healers. In addition, social stigma around TB has more impact on women's lives than on men's. It is therefore completely justifiable to consider that all these factors contribute to limiting access to health services, in particular TB services, for women more than for men.
It should be noted that HIV prevalence is 70 percent higher among women than among men (4.6 percent among women against 2.7 percent among men),[10] which suggests that HIV infection is contributing to the TB outbreak in women more than in men.

8. Diabetics

The risk of contracting TB is 2.5 times greater among diabetics.[13] In 2010, prevalence of diabetes in Côte d'Ivoire was around 9 percent among the adult population aged 40-50.[14] A relatively large number of patients consult outpatient services because of their diabetes. These consultations are arranged specifically for diabetic patients in a large number of health services in Côte d'Ivoire. However, the NTCP has not yet developed a plan to implement a system for detecting TB in these patients, particularly in the outpatient environment.

Conclusion: the largest key populations which need to be targeted to have an impact on the TB dynamic in the general population are: i) those with difficult or no access to care services and TB control services, and ii) PLHIV, who represent a high-risk population for TB. However, at-risk groups such as contacts of TB patients and miners, and vulnerable populations such as children and prisoners, will be by no means ignored by this concept note.

c.

The lack of access to health services for certain categories of the population known to be vulnerable is a breach of human rights. However, Article 7 of the Constitution of 23 July 2000 guarantees all citizens equal access to health. The right to health is lacking for large numbers of the population who face geographic and financial difficulties in accessing health care.
In addition, certain target populations suffer from stigma and this undermines their effective right to health. There is a stigma attached to TB (as a disease) as well as to patients undergoing treatment and control. Furthermore, the stigma perceived by certain patients contributes to reducing their access to treatment and surveillance.
However, in 2014, the government adopted a law that responds in part to the stigma suffered by PLHIV (Law n° 2014-430 of 14 July 2014 on a system for prevention, protection and suppression in controlling

[13] World Health Organization and International Union against Tuberculosis and Lung Disease. Collaborative framework for care and control of tuberculosis and diabetes. WHO, Geneva 2011. WHO/HTM/TB/2011.15.
[14] Obesity and Diabetes Association of Côte d'Ivoire, 2012 Report.

HIV/AIDS). The charter for patients with TB stipulating their rights and duties as described by WHO is neither promoted nor publicized in Côte d'Ivoire.
Lastly, the right to health is also breached because most patients are unaware of their rights and have only limited access to legal services.[15] According to the gender-related inequality index,[16] behavioral factors and socio-cultural standards rank Côte d'Ivoire 171 out of the world ranking of 187. These standards can be constraints that prevent women from benefiting from the same opportunities in accessing services as men, placing them at higher risk and at a greater disadvantage in access to treatment and health care.

The dynamics of gender-related TB is not yet well understood in Côte d'Ivoire. One of the few studies in West Africa considers the lower literacy levels of women a reason for their infrequent use of health services and their major vulnerability to stigma.[17]
No gender-focused planning has been implemented yet to respond to these constraints and to address gender-related inequalities. During the period 2016-2017, the NTCP plans to conduct a study into equity in accessing health care, to better identify gender-related inequality. The results of this study will help adapt and implement measures to benefit target populations, including women and young girls.

d.

1. National health policy and the country's health priorities

Through the MSLS, the government has prepared a National Strategic Plan (NSP)[18] and a National Health Development Plan (NHDP)[19] for 2012-2015, to improve the state of health and well-being of the population. It targets the priority of strengthening the national response to HIV/AIDS, control of malaria, TB, malnutrition, nosocomial infections and other diseases. This NHDP is currently under review in order to prepare the next one, which will cover the period 2016-2020.

2. Organization of the health system

The health system in Côte d'Ivoire includes public and private sectors, a traditional medicine sector and a community system.

2.1 The public health sector

The public health sector is the principal health care provider. It consists of three levels.
The health district is the operating unit of the health system and brings together all health care facilities in its catchment area, which in turn provide essential care to the population.

2.1.1 Description according to public health system level

2.2.1.1 Central level

The central level comprises the MSLS office with its related departments and services, the Directorate-General of Health (DGS), 7 central management departments,[20] 13 national public institutes and 22 departments to coordinate priority health programs, including the NTCP.
Health care is provided at central level by the key health care facilities, which are the university hospitals in Bouaké, Cocody, Yopougon and Treichville and specialist institutions such as the Pasteur Institute in Côte d'Ivoire, which houses the National Reference Laboratory (NRL) for mycobacteria.

2.2.1.2 Intermediary level

At the intermediary level there are 20 regional health departments (RHDs): each one of them covers several health districts. Among other functions, the health district coordinates implementation of the NSP, performance monitoring and evaluation of health services, including those related to TB control.
The intermediary level provides health care through regional hospitals (CHRs) and specialist hospitals (CHS). There are also 17 TB treatment centers that are regional referral centers in TB control.

[15] 2013 KAP Survey/2016-2020 NSP.
[16] 2013 UNDP Report.
[17] S.V. Eastwood, P.C. Hill. A gender-focused qualitative study of barriers to accessing tuberculosis treatment in the Gambia, West Africa. Int J Tuberc. Lung Dis 2004; 8(1): 70-75.
[18] 2011-2015 National Strategic Plan.
[19] 2012-2015 National Health Development Plan (NHDP).
[20] Decree no. 2014-554 of 1 October 2014 on the organization of the Ministry of Health and AIDS Prevention (MSLS).

2.2.1.3 Peripheral level

At the peripheral level, there are 82 health district departments, or health districts.

At this level there are 2,111 primary health care facilities, also known as health centers (urban or rural) or urban health care facilities. Around 60 percent of TTCs are located in primary health care facilities; the remaining 40 percent are located at the intermediate or tertiary level (see Annex 2).

2.1.2 Human resources

In Côte d'Ivoire there is one doctor per 9,899 inhabitants, one nurse per 4,020 inhabitants and one mid-wife per 1,773 women of child-bearing age.[21]

2.1.3 Sources of health funding

In Côte d'Ivoire, health is funded by the state, development partners and households. In the state budget, 5.5 percent is allocated to the health of the national population;[22] 76 percent of total spending is covered by households and 8 percent by foreign partners.[23] In 1994, a health cost recovery policy was implemented and in 2001 the government decided to implement a universal health insurance system.[24]

2.1.4 Health partnerships

The development partners, among them bilateral and multilateral international cooperation agencies, agencies belonging to the United Nations System (UNS), international nongovernmental organizations (NGOs), representatives of world initiatives targeting health, and philanthropic individuals or agencies, are all parties to the implementation of the NHDP.

2.1.5 National system for the procurement and supply management of pharmaceutical products and other consumables

Depending on needs, the procurement center, known as the new public health pharmacy in Côte d'Ivoire (new PSP-CI or NPSP), supplies public health care facilities based on a pre-planned time schedule that guarantees availability of: i) all drugs on the national list of essential drugs, and ii) other consumables. It is responsible for storage of laboratory supplies and anti-TB drugs and for their distribution to TB treatment centers.

2.1.6 National monitoring and evaluation system

The Department for Forward Planning, Assessment and Health Information (DPPEIS) manages the National Health Information System (NHIS) implemented in 1995. It collects, processes, analyzes, produces and publishes data coming from public, non-sectarian and private health care facilities and companies in the country.

The performance monitoring and evaluation system used by the NTCP has not yet been fully integrated into the NHIS.

New data management software (District Health Information System – DHIS 2), which takes account of the NTCP's key indicators, is being rolled out with the support of the Global Fund, the President's Emergency Plan For AIDS Relief (PEPFAR), the Global Alliance for Vaccines and Immunization (GAVI) and the United Nations Population Fund (UNFPA), in collaboration with the NACP, National Malaria Control Program (NMCP), NTCP and DPPEIS. However, this software is not yet in operation on all sites.

2.1.7 Leadership and governance

On the whole, an analysis of the health system reveals many defects at the institutional, leadership, management and governance levels, as well as in decentralization and integration of national health programs. Planning and coordination of health measures remains inadequate at all levels of the health pyramid and restricts the global performance of the health system.

Similarly, the admissibility mechanism is weak in encouraging health system managers to regularly report their management of the planning and funding levels.[17]

2.2 Private health sector

[21] 2013 Annual Health Statistics Report (RASS).

[22] 2013 Health Accounts.

[23] WHO. Health statistics. 2013 Report

[24] N'Guessan Coffie Francis José. Contribution from rural households to financing universal health insurance in Côte d'Ivoire. University of Cocody, Abidjan, Côte d'Ivoire Côte d'Ivoire Economic and Social Research Center 2006

The private health sector has 2,036 centers, including 13 polyclinics, 136 clinics, 964 infirmaries, 114 medical consulting rooms, and 463 health care facilities coming under commercial and industrial companies. The private health sector is organized within the context of the Côte d'Ivoire Association of Private Clinics (ACPCI). On the whole, there is little collaboration between the private and public sectors.

2.3 Traditional medicine sector

In 2007, more than 8,500 practitioners of traditional medicine (PTMs) were recorded in the census conducted by the national program to promote traditional medicine. For many Côte d'Ivoire nationals, PTMs are the first health care providers they access, before consulting public health care services as a second resort. A regulatory framework for the practice of traditional medicine in Côte d'Ivoire has been adopted but has not yet been endorsed by the National Assembly.

3. Community system

Côte d'Ivoire has a crowded not-for-profit sector, with many organizations working in the field of health development.

According to the Directorate of Community Health and Local Medicine (DSCMP), there are 14,520 community health workers (CHWs) and matrons, recruited by health districts.

The community system comprises two categories of actors:

1. The CHWs, organized within the framework of the MSLS, mainly operate in rural areas and provide basic health services (maternal and child health, environmental health, malaria, HIV, TB, mental health, etc.). As part of TB control measures, 2,130 CHWs have been trained to: i) refer those with symptoms compatible with TB to TB treatment centers and TTCs; ii) support patients on treatment; and iii) re-engage patients who have abandoned treatment.
2. Community counselors, who are in fact active members of relevant NGOs. In the context of TB control, there are 202 community counselors working in urban areas. Their role covers: i) community awareness-raising, ii) detection and referral of presumed TB cases to tuberculosis treatment centers (TB TCs) and tuberculosis testing and treatment centers (TTCs), iii) direct supervision of patients taking TB treatment, iv) contribution to review systematic (active) screening for TB among contacts of TB patients, v) support for treatment adherence through education, and vi) re-engagement in treatment for missing patients.

Since 2007, relevant NGOs working in TB control have been grouped in a network known as the Tuberculosis and Respiratory Illness Organizational Collective (COLTMR).

The community system has the following constraints:

- insufficient functioning of the collaborative framework between the NGOs and the NTCP;
- shortage of guidelines defining the role of community actors;
- lack of involvement of TB patients (or former patients) within NGOs and the COLTMR network;
- insufficient training and supervision for CHWs and community counselors in terms of TB control;
- poor integration of TB control into the activities of NGOs active in HIV control and women's organizations;
- lack of guidelines for TB control in relation to vulnerable populations and groups at high risk of TB;
- lack of standardization of incentives for CHWs and community counselors between the different health projects;
- shortage of tools for community awareness-raising (e.g. image boxes, leaflets, etc.);
- lack of simplified tools for data collection in relation to monitoring and evaluation;
- lack of integration of community indicators into the NTCP's information system;
- insufficient financial resources allocated by community interventions to TB control.

1.2 National Disease Strategic Plans

With clear references to the current **national disease strategic plan(s)** and supporting documentation (include the name of the document and specific page reference), briefly summarize:

a. The key goals, objectives and priority program areas.
b. Implementation to date, including the main outcomes and impact achieved.
c. Limitations to implementation and any lessons learned that will inform future implementation. In particular, highlight how the inequalities and key constraints described in question 1.1 are being addressed.
d. The main areas of linkage to the national health strategy, including how implementation of this strategy impacts relevant disease outcomes.
e. For standard HIV or TB funding requests , describe existing TB/HIV collaborative activities, including linkages between the respective national TB and HIV programs in areas such as: diagnostics, service delivery, information systems and monitoring and evaluation, capacity building, policy development and coordination processes.
f. Country processes for reviewing and revising the national disease strategic plan(s) and results of these assessments. Explain the process and timeline for the development of a new plan (if current one is valid for 18 months or less from funding request start date), including how key populations will be meaningfully engaged.

a.

The current NSP 2012-2015 was prepared by the NTCP and continues on from the 2006-2010 NSP to include the WHO Stop TB Strategy.

The goals, objectives and principal priority interventions of the NSP 2012-2015 are:

<u>Impact result</u>

Incidence of MDR-TB in new cases down to 1 percent.

- <u>Outcome results</u>
  1. Country coverage of one center per 100,000 inhabitants for the detection and treatment of TB.
  2. 85 percent recovery rate from treatment of new cases with smear-positive TB
  3. 80 percent of patients with TB tested for HIV
  4. 100 percent of cases of MDR-TB benefit from DOT

- Strategic approaches/service provision areas: six strategic approaches have been identified with the aim of achieving the planned impact, and these are:
  - extending and strengthening a quality directly observed treatment, short-course (DOTS) strategy;
  - control of TB/HIV co-infection, MDR-TB and a response to the needs of poor and vulnerable populations;
  - contribution to Health Systems Strengthening (HSS) based on primary health care;
  - involving all carers;
  - involving patients and communities in partnerships;
  - promotion of operational research.

The service provision areas below are smoothly integrated into the plan as follows.

- Extending and strengthening a strategy for quality DOTS:
  - improving access to precise diagnosis and effective treatment;
  - tuberculosis in children;
  - patient support;
  - procurement and supply management;
  - monitoring and evaluation;
  - management and supervision of the NTCP's activities.

- Control of TB/HIV co-infection, MDR-TB and a response to the needs of poor and vulnerable populations:
  - TB/HIV co-infection;
  - MDR-TB;
  - high-risk groups: prisoners;
  - specific group: herdsmen;
  - infection control.

- Contribution to HSS based on primary health services:
  - infrastructure;
  - human resources development;
  - practical approach to lung health (PAL).

- Involving all carers:
  - commitment of sectors other than those of the MSLS or the state (all carers).

- Involving patients and communities in partnerships:
  - awareness-raising, communication and social mobilization.

- Promotion of research

b.

The NTCP has a Central Unit called the Directorate for Coordination of TB Control in Côte d'Ivoire, which comprises eight technical services.

The state contributes to TB control with an annual budget of around EUR 2 million, which covers salaries, infrastructure, running operations, and the utility costs of water and electricity. The Global Fund has provided financial support for this work through grants approved in Rounds 3, 6 and 9.

The NTCP has: i) built management capacity within the 17 TB TCs and 143 TTCs throughout the country; ii) installed a network of 160 laboratories; and iii) integrated the services of detection and treatment of TB into the health services provided by health centers used by large numbers of the population. These services conform to international recommendations and all treatment services are free of charge for all patients who have been living in Côte d'Ivoire since February 2015. Previously, any patient receiving treatment had to pay 5,000 CFA francs, which was used to pay salaries and incentives to a certain number of health workers involved in TB control activities, and to pay for consumables for use in radiology.

Under the Round 9 TB grant from the Global Fund, the activities of the community PR covered 127 of the 160 TB TCs and TTCs. In rural areas, 2,130 CHWs were trained and distributed among the villages around 76 TTCs. In urban areas, 202 community counselors from 28 NGOs were recruited and are working in 51 TTCs/TB TCs. According to data collected by the community PR, in 2013, CHWs contributed to the detection of 12 percent of cases found in the TTCs and TB TCs with which they are associated, and to treatment monitoring for 52 percent of patients treated in these centers. In 2011, prior to the involvement of CHWs, the proportion lost to follow-up (LTFU) was 9 percent on the national scale; in 2013 it was 6 percent.

The treatment success rate for new cases of PTB+ increased from 68.5 percent in 2001 to 82 percent in 2012. The proportion of TB patients failing to complete their treatment has fallen by almost one half during the same period (from 15 percent in 2001 to 6 percent in 2013), but the mortality rate has remained unchanged at around 7 to 8 percent a year. It should be noted that, in some regions such as Hambol or Poro-Tchologo-Bagué, the mortality rate among patients enrolled on anti-TB treatment is over 12 percent.

Planned treatment for cases of MDR-TB has developed significantly. The number of MDR-TB cases detected rose from 221 cases in 2012 to 471 cases in 2014. The number of MDR-TB patients treated with second-line drugs (short 9-month course within the context of an observation study coordinated by the International Union Against Tuberculosis and Lung Disease) rose from 66 in 2013 (17 percent of cases detected) to 313 in 2014 (66 percent of cases detected).

Collaborative TB/HIV activities have been developed together with the NACP; in 2014, 93 percent of cases of TB detected were tested for HIV (compared with 75 percent in 2009) and 25 percent were found to be positive. Of those with TB/HIV co-infection, 67 percent were placed on antiretrovirals (ARVs) (compared to 31 percent in 2009) and 78 percent were placed on co-trimoxazole (compared with 69 percent in 2009). According to NACP data, half of all PLHIV recorded and monitored were systematically screened for TB.[25]

c.

A TB TC depends administratively on a health district, but it coordinates and supervises TTC activities: i) in several districts that may be located in different health regions or ii) in some of the districts of a single health region. Besides this, certain health regions may have several TB TCs and others none at all. The network of TB TCs and the distribution of health regions are inadequately arranged. This causes problems with: i) administrative management, allocation and mobilization of resources and NTCP leadership at the intermediary level; and ii) communication between the Central Unit and, on one hand, the TB TCs, and on the other, the health regions.

[25] NACP estimate.

One of the main obstacles identified in treating cases of TB is that there are not enough TB TCs, and this limits the work of diagnosis and patient surveillance. On average there is only one TTC or TB TC equipped with a microscopy laboratory per 145,000 inhabitants in the whole country; but this may vary in some districts to one laboratory for over 400,000 inhabitants. In addition, NTCP data suggest that the process for identifying patients who should be investigated for potential TB is more selective than it should be. Data from 2013 and 2014 show that only six patients with presumed TB were screened for each case of PTB+ identified. As a consequence, it is highly likely that a significant number of patients who meet the criteria for "suspected TB" (a productive cough lasting for over two weeks) do not have their sputum subjected to microscopy tests.

The success rate in treating TB has not yet reached the required rate of 85 percent; in 2013, it was only 82 percent for PTB+. The failure to meet this success rate can be explained not only by the relatively high rate of treatment dropout (6 percent in 2013) but above all by a significantly high death rate during treatment (8 percent in 2013). It could be that the high death rate is associated with:

- late diagnosis of TB in patients who reach health services with extensive lesions and whose state of health has already declined;
- TB/HIV co-infection.

Significant progress has been made in treating MDR-TB patients now that GeneXpert machines have been installed; there are currently ten in Côte d'Ivoire. However, patients who should benefit from GeneXpert testing are not all assessed throughout the country because it is difficult to conserve and transport test samples to locations equipped with these machines. A large number of MDR-TB patients are treated at TB TCs in Abidjan and its region, where capacity is not sufficient to meet demand. Since the end of 2014, treatment and assessment of MDR-TB patients has been decentralized to all TB TCs. However, pre-treatment assessment often takes a long time for most MDR-TB patients due to operational constraints; this holds back treatment administration. There is only very limited potential for hospitalizing MDR-TB patients whose general state of health has declined in the university hospitals of Abidjan. A national survey into prevalence of drug-resistant TB began at the end of August 2015, with support from the Global Fund under Round 9. The results of this will enable a more precise estimate of the extent of the MDR-TB problem.

The collaboration framework created in 2008 for the stakeholders treating TB and HIV (NTCP, NACP, PEPFAR, UNAIDS, WHO) helped define coordinating mechanisms for joint control at all levels of the health system (central, regional, district). However, these coordinating mechanisms are not yet functioning adequately at the regional and district levels, and have had a negative effect on the integrated treatment of patients with TB/HIV co-infection in PLHIV treatment centers.

On the whole, health services do not apply the standards for controlling TB infection.

Private health care providers are not involved in efforts to control TB. Their contribution to detection of TB cases is not known.

Quantification of needs for anti-TB drugs, order planning and stock assessment are generally unsatisfactory, particularly in TB TCs and TTCs. Staff in charge of supply management are often untrained, or poorly trained. This may be the cause of surplus stocks or stock-outs in health services. Storage conditions and drug conservation are also often inadequate. The Global Drug Facility (GDF) supplies all anti-TB drugs (first- and second-line) and provides their quality control. Conditions in which to conduct quality control on drugs as a whole, and anti-TB drugs in particular, are difficult. They involve different administrative bodies and may lead to delaying drug availability. The pharmacovigilance system, in place since 2013, is barely functioning. National regulations in force stipulate that anti-TB drugs can only be made available in public health care facilities. Although anti-TB drugs are not available in private pharmacies, it has been reported that they freely on sale on the parallel market.

With the recent application of circular No. 0686/MSLS/CAB of 10 February 2015 (Annex 3) banning the sale of the TB control stamp (see above in paragraph 1.2.b) throughout the country, staff salaries provided by revenue generated from the sale of stamps will not be paid. A variety of health workers are part of this staff: microscopists, assistant carers (often responsible for the administration and direct supervision of treatment), support staff (center maintenance, security agents, filing clerks, radiology unit assistants). This decision risks prejudicing the work of TB TCs and TTCs, some of which will lose staff, including laboratory staff.

At the community level, there are still challenges to be faced. These involve mainly: the small proportion of cases monitored by the community; poor care center coverage; poor collaboration between the NTCP and community stakeholders; and community service provided not adapted to needs.

Future measures suggested based on the observations above are:

- The NTCP will suggest to the MSLS a specific administrative status for the TB TCs, so that each health region can have its own TB TC. This will mean that TB TC administration and coordination will be adapted to that of the health region.
- Access to services dealing with TB, particularly diagnostic services, should be improved and the number of laboratories increased.
- Diagnosing and treating patients presumed to have TB should be improved by training health workers (public and private) and community workers and by supervising the correct implementation of these measures.
- Treatment success rates should be improved by: i) ensuring TB control drugs are available for patients, ii) improving the involvement of community workers in administering treatment to patients, iii) reducing delays in diagnosis (through improving identification and treatment of suspected TB patients and access to TB laboratories), iv) ensuring HIV testing for patients with TB, v) providing HIV-positive TB patients with ARVs and co-trimoxazole, and vi) the routine assessment of death rates among patients with TB/HIV co-infection who are being treated for TB.
- Capacity to manage MDR-TB patients should be built up at the TB TC level so that their management can be decentralized to this level.
- Coordinating mechanisms between stakeholders involved in the control of TB and HIV should be improved and strengthened, particularly at regional and district level. In addition, all PLHIV monitored in HIV treatment centers should be systematically screened for TB.
- Capacities for controlling TB infection should be improved, particularly in centers handling cases of MDR-TB and patients with TB/HIV co-infection.
- The NTCP should approach the private health sector and implement a strategy to involve it in TB control activities.
- Drug and consumable management capacity should be improved and strengthened, not only at the central level but also in the TB TCs, TTCs and peripheral health centers.
- The pharmacovigilance system should be implemented adequately by the Department of Pharmacy, Medicines and Laboratories (DPML).
- The national survey into TB drug-resistance should be carried out and completed.
- The framework between the NGOs and the NTCP will be responsible for: i) validating and disseminating operational guidelines for the implementation and strengthening of TB control activities, including monitoring indicators for community interventions; ii) validating training modules for CHWs and community counselors, and data collection tools; iii) encouraging the involvement of NGOs operating in the areas of HIV control, TB control, and maternal and child health and other health services; and iv) monitoring and evaluating program performance.
- The COLTMR network and the NGOs should receive capacity building in advocacy, planning, management, and monitoring and evaluation.
- The performance of CHWs and community counselors in referring presumed TB cases and in monitoring patients should be strengthened through: training, monthly meetings with nurses and laboratory technicians from TTCs and TB TCs to validate reports, supervision, payment of performance-based bonuses, and involvement of TB patients and former patients.
- Monetary compensation mechanisms should be put in place for health workers who were receiving their salaries or their allowances from the sale of stamps.

d.

Strategic interventions implemented by the NTCP are clearly specified in the 2012-2015 NHDP.

TB control is addressed in this plan through other interventions included under the following strategic areas:

- developing the public-private partnership;
- more decentralization of management capacities for human, material and financial resources at regional and district health levels to adapt the NHDP to local conditions and to implement it by producing regional and departmental health development plans in which all health programs, including TB control, are incorporated;
- better integration of data sources;
- resource mobilization and control in using these financial resources;
- modernizing, re-equipping and applying standards for health centers;
- creation of new specialist health centers;

- quantitative and qualitative adaptation of human resources production to health system needs so that there is even distribution throughout the country;
- ongoing training for health workers;
- availability of quality drugs and other consumables;
- financial accessibility of populations to prevention, care and treatment services;
- strengthening of community interventions;
- strengthening outreach and mobile strategies.

In addition, implementing TB control interventions and measures has helped strengthen and substantiate the components of the health care system, particularly in: i) management capacity building, ii) strengthening the national laboratories network, iii) drug management, iv) mobilization of financial resources with the international partners, particularly the Global Fund and PEPFAR, v) developing human resources, vi) integrating health care in health services and in the community network, and vii) strengthening the information system.

e.

HIV counseling and testing began in 1989, in two TB TCs in Abidjan with the support of the Côte d'Ivoire RETRO project.

Within the context of essential preventive services, and services for care and treatment in controlling TB/HIV co-infection, the NTCP and NACP adopted the WHO strategy that recommends implementing the 12 collaborative measures for TB/HIV specified in the Stop TB Strategy.

After the partnership framework had been defined in December 2008,[26] coordinating mechanisms between the NTCP and the NACP were created at the national, regional and district levels.

The Country Coordinating Mechanism (CCM) involves a technical TB/HIV working group including the managers and core partners of the two programs. Its mission is to: i) coordinate all measures for the joint control of TB/HIV, ii) prepare policies and strategies to control co-infection, and iii) ensure advocacy in mobilizing resources. Thanks to the support of the Global Fund, the working group meets once every three months. Several working documents have been drafted, edited and widely disseminated to the stakeholders involved in joint control.

At regional level, the coordination mechanism includes the principal stakeholders involved in TB and HIV/AIDS control. Its role is to: i) make known and apply national guidelines on the joint control of TB/HIV, ii) coordinate control measures in the region, iii) monitor the implementation of joint control measures in the districts, and iv) contribute to mobilizing resources for these measures to become sustainable. However, because of the lack of financial support, this mechanism is not fully functional in most regions.

At the district level, the coordinating mechanism includes the principal stakeholders in TB and HIV/AIDS control. Its missions are to: i) apply national guidelines for joint control, ii) report on work done in the region, and iii) supervise workers at TTCs dealing with TB/HIV co-infection. Although all the stakeholders involved are members of the District Management Team (DMT), the problems inherent in TB/HIV co-infection rarely appear on the agenda in most districts.

In 2014, of the 270,635 PLHIV registered with HIV care centers[27], 2,807 had TB. According to NTCP and NACP guidelines, active screening for TB in PLHIV should be carried out in centers using a standardized, systematic research form to record symptoms. Suspected TB cases must be referred to the nearest TTC or TB TC. However, TB screening is not yet systematic in all care centers, including centers for the prevention of mother-to-child transmission (PMTCT).

In 2014, of the 160 TTCs in the NTCP network, 17 TB TCs were providing management of patients with TB/HIV co-infection using the *One Stop Shop* model. In addition, 17 TTCs situated in health district premises systematically provide rapid tests for HIV and refer patients identified with co-infection to HIV treatment centers for the administration of antiretroviral therapy (ART). The remaining 126 TTCs are based in health care facilities which provide care services for PLHIV, including dispensation of ARVs, but which are located in different departments to those for HIV. To summarize, TB patients are provided with ART in 143 health care facilities (126 centers including TTCs and 17 TB TCs). Regardless of the model, all 160 TTCs and TB TCs provide systematic HIV testing for TB patients. In 2014, 93 percent of TB patients were tested for HIV.

[26] Ministry of Health and Public Hygiene. National Tuberculosis Control Program (NTCP) and National PLHIV Treatment Programme. Partnership framework in joint tuberculosis and HIV/AIDS control in Côte d'Ivoire. 2009 edition.

[27] National AIDS Committee. GARP National Report, Côte d'Ivoire 2014.

There are 746 HIV treatment centers in Côte d'Ivoire, including the 17 TB TCs and 126 TTCs mentioned above. The remaining 603 centers provide active searches for TB at every monitoring visit for PLHIV and refer all presumed TB cases to NTCP services. In 2014, 50 percent of PLHIV monitored by NACP services received active screening for TB.
It should be noted that the data collection tools for joint TB/HIV activities are available in the NTCP network as well as the NACP network.

CHWs play an important role in caring for and monitoring patients. Apart from their usual mission, they provide care and support for patients with TB/HIV co-infection and look after patients said to be cured of TB in treatment centers for PLHIV in order to monitor their antiretroviral therapy.

IPT has not yet been implemented in Côte d'Ivoire for PLHIV who do not have active TB. However, a survey into its effectiveness (Temprano Survey),[28] funded by the French National Agency for AIDS Research, was conducted from March 2008 to January 2015, within the framework of the NACP and French Cooperation in Côte d'Ivoire, in nine treatment centers for PLHIV in Abidjan. This survey has just been completed. The final decision on adoption of IPT for PLHIV without active TB will be taken once the NTCP's scientific support group reports its recommendations.

In 2014, collaboration among all TB TCs and TTCs and treatment centers for PLHIV helped to ensure that 67 percent of patients with TB/HIV co-infection received ART and 78 percent received co-trimoxazole prophylaxis.
In terms of controlling TB infection in health institutions, the strategy, TB transmission control guide, training modules, situational analysis table and framework model for centers' micro plans have been produced and endorsed with support from PEPFAR and the Global Fund.

f.
The main amendment process for the 2012-2015 NSP for TB control began with an NTCP review organized in collaboration with WHO and the International Union Against Tuberculosis and Lung Disease (the Union) from 23 June to 4 July 2014. Based on the findings of the review and its recommendations, a new NSP was produced for 2016-2020 with the participation of the partners involved in TB control in Côte d'Ivoire.
The plan was reviewed by various partners, such as WHO, the Union, PEPFAR and the Global Fund, to make it more coherent and to identify any possible programmatic or financial shortcomings. The interventions of the community stakeholders were identified and analyzed with the support of the consultants for the Stop TB Partnership.
The new NSP was endorsed in January 2015 with the participation of MSLS managers, civil society stakeholders, NGOs/community-based organizations (CBOs) and technical partners.
These different stages have led to an agreed 2016-2020 NSP that provides a national response to the problem of TB in Côte d'Ivoire. The midterm assessment of this plan is scheduled for 2018 with a final assessment in 2020.

SECTION 2: FUNDING LANDSCAPE, ADDITIONALITY AND SUSTAINABILITY

To achieve lasting impact against the three diseases, financial commitments from domestic sources must play a key role in a national strategy. Global Fund allocates resources which are far from sufficient to address the full cost of a technically sound program. It is therefore critical to assess how the funding requested fits within the overall funding landscape and how the national government plans to commit increased resources to the national disease program and health sector each year.

2.1 Overall Funding Landscape for Upcoming Implementation Period

In order to understand the overall funding landscape of the national program and how this funding request fits within this, briefly describe:

[28] ANRS Assay 12136 Temprano.

a. The availability of funds for each program area and the source of such funding (government and/or donor). Highlight any program areas that are adequately resourced (and are therefore not included in the request to the Global Fund).
b. How the proposed Global Fund investment has leveraged other donor resources.
c. For program areas that have significant funding gaps, planned actions to address these gaps.

a.

Table 1 provides a financial gap analysis per priority area of the NTCP from July 2015 to December 2017. Estimated needs for TB control in Côte d'Ivoire during this period amounts to EUR 63,577,569. The financial deficit for this period is EUR 52,816,121 which is 83 percent. It varies from 64 percent (for MDR-TB) to 76 percent (program management) according to the priority areas of the NSP for TB control. Note that no area will be entirely covered by commitments made by the state and the various partners. Therefore Global Fund support in each of these areas will help reduce the deficit considerably.

Table 1: Financial gap analysis per program priority area, 2015-2017 (in EUR)

PRIORITY AREAS	NEEDS	STATE	WHO	UNION	PEPFAR	FIND	COMMIT-MENTS	GAP	%
TB treatment and prevention	35,071,084	4,494,070	3,660	-	-	-	4,497,730	30,573,354	**87%**
TB/HIV	4,708,464	801,261	3,660	-	339,442	-	1,144,363	3,564,101	**76%**
MDR-TB	5,933,299	1,815,706	3,659	21,000	-	316,199	2,156,564	3,776,735	**64%**
Monitoring and evaluation	9,998,234	1,041,508	34,744	21,000	-	-	1,097,252	8,900,982	**89%**
Program management	7,866,489	1,798,881	3,659	63,000	-	-	1,865,540	6,000,949	**76%**
Total	63,577,569	9,951,426	49,382	105,000	339,442	316,199	10,761,449	52,816,121	**83%**
	(A)	**(B)**	**(C)**	**(D)**	**(E)**	**(F)**	**(G=B+C+D +E+F)**	**(H=A-G)**	**H in %**

As mentioned above, no program area is fully covered. Prioritization of needs, based on the allocation amount, makes it possible to cover the essential needs (drugs, laboratory supplies, human resources, supervision and community management of TB) for a total of EUR 12,629,991. The difference between this and the financial gap reported above is due to the fact that the concept note only covers the activities considered of highest priority to achieve impact.

b.

Apart from its usual contribution and its commitment to willingness-to-pay, the government of Côte d'Ivoire has obtained commitments from the partners not only to continue their contribution but also to increase it. These partners are:

- The International Union Against Tuberculosis and Lung Disease (the Union), which intervenes in Côte d'Ivoire essentially to provide technical support for monitoring and evaluation at the time of the annual NTCP evaluation.
- PEPFAR which contributes, within the context of the Project for Capacity Building in the Health Sector for the Prevention, Care and Treatment associated with HIV/AIDS (MSHP/CoAg Project), in the control of TB/HIV co-infection for the average annual sum of EUR 113,147. PEPFAR funding contributes mainly to implementing collaboration measures between the NTCP and the NACP.
- WHO funds TB control through its plan every two years. Its contribution from 2013 to 2015 is estimated at an average of EUR 15,471 per year and is used to revise technical policies and guidelines for TB control. Within the context of implementing the strategy post-2015 (End TB Strategy), it will contribute to funding the 2016-2020 NSP in TB control for a minimum annual sum of EUR 6,098.

Funding promised by the partners and expected from the government remains insufficient to meet the planned objectives of the NSP for TB control. The support from the Global Fund will help meet the challenges of TB control and the health system (procurement and stock management, monitoring and evaluation system and others) but it will also give a further boost to leadership, management and governance (LMG), a sign of partner commitment.

c.

Country dialogue initiated by the CCM has helped to mobilize all partners to guarantee that all stakeholders are included in the process of developing the national TB strategy and the concept note.
Furthermore, consultation meetings are also planned with all key technical and financial stakeholders and partners throughout the period in which the NSP for TB control is implemented.
In addition, the government of Côte d'Ivoire, under the leadership of the Minister of Health and in close collaboration with the CCM, will continue to coordinate and supervise the implementation of planned interventions so that the best use can be made of available resources and to reassure partners to facilitate increased funding.

As mentioned above, no program area is fully covered. The prioritization of activities in this concept note has therefore taken into account, on one hand, the traditional requirements of a national TB program and, on the other, activities required to provide adequate solutions to current and future problems and gaps in TB control in Côte d'Ivoire. The traditional requirements to ensure normal continuity of services, itemized within the allocation amount for a total of EUR 11,898,525, are:

- first- and second-line drugs, including the costs of procurement, storage, quality control and distribution;
- supplies for diagnosis and monitoring of patients (microscopy kits, culture and sensitivity tests, GeneXpert kits and calibration kits);
- human resources (salaries of staff allocated to grant management and bonuses for staff involved in program management and in patient treatment);
- costs related to management of MDR-TB patients (pre-treatment and monitoring assessments, management of hearing problems, travel costs for DOT and for monitoring checks, and capacity building for workers allocated to case management);
- extended coverage of TB services (creation of 62 new TTCs, including refurbishment, staff training and provision of equipment and diagnostic supplies; integration of 480 peripheral health care facilities);
- TB/HIV activities, almost 100 percent covered by PEPFAR;
- supervision of activities of TB TCs, TTCs, primary health care facilities and CHWs;
- supervision and quality control for the microscopy network laboratories.

In addition to these traditional activities, community activities for a combined total of EUR 2.9 million have also been included within the allocation amount. These will contribute not only to referral of presumed cases but also to monitoring of patients undergoing treatment, with the aim of reducing the number of those abandoning treatment.

2.2 Counterpart Financing Requirements

Complete the Financial Gap Analysis and Counterpart Financing Table (Table 1).The counterpart financing requirements are set forth in the Global Fund Eligibility and Counterpart Financing Policy.

a. Indicate below whether the counterpart financing requirements have been met. If not, provide a justification that includes actions planned during implementation to reach compliance.

Counterpart Financing Requirements	Compliant?	If not, provide a brief justification and planned actions
i. Availability of reliable data to assess compliance	☒Yes ☐ No	
ii. Minimum threshold government contribution to disease program (low income-5%, lower lower-middle income-20%, upper lower-middle income-40%, upper-middle-income-60%)	☒Yes ☐ No	
iii. Increasing government contribution to disease program	☒Yes ☐ No	

b. Compared to previous years, what additional government investments are committed to the national programs in the next implementation period that counts towards accessing the willingness-to-pay allocation from the Global Fund. Clearly specify the interventions or activities that are expected to be financed by the additional government resources and indicate how realization of these commitments will be tracked and reported.

c. Provide an assessment of the completeness and reliability of financial data reported, including any assumptions and caveats associated with the figures.

b.

The average annual state contribution to TB control for the period 2013-2014 was EUR 2,270,022. This state contribution covers: i) the salaries of the staff of 17 TB TCs and of the NTCP and ii) the operating budgets of the NTCP, the 17 TB TCs and a third of the working budget of the CCM, electricity consumed and infrastructure improvements.

As indicated in Table 2 below, this contribution has been revised upwards with a willingness-to-pay for the total sum of EUR 1,467,578 in the context of this concept note.

Table 2: Côte d'Ivoire government counterpart and willingness-to-pay for TB, 2015-2017 (in EUR)

	BUDGET			
Anti-TB drugs	**2015**	**2016**	**2017**	**TOTAL**
First-line	106,714.31	57,236.98	173,061.95	337,013.25
Second-line	-	93,687.54	200,427.47	294,115.01
TOTAL 1: Drugs (A)	**106,714.31**	**150,924.53**	**373,489.42**	**631,128.26**
Laboratory equipment and products				
67 Microscopes	46,649.40	68,602.06	68,602.06	183,853.51
Equipment (Bunsen burners, iceboxes, storage batteries)	11,662.35	5,488.16	4,321.93	21,472.44
Gas bottles	2,667.86	1,600.71	1,333.93	5,602.50
Surgical masks and respirators		15,778,47	101,916,34	117,694,81
TOTAL 2: Laboratory (B)	**60,979.61**	**91,469.41**	**176,174.25**	**328,623.27**
Purchase of two vehicles	0	91,469.41	0	91,469.41
TOTAL 3: Vehicles (C)	**0**	**91,469.41**	**0**	**91,469.41**
Refurbishment and equipment for 17 TTCs	15,244.90		35,234.85	50,479.75
TOTAL 4: Infrastructure (D)	**15,244.90**	**0.00**	**35,234.85**	**50,479.75**
Communication tools (posters, pamphlets, banners, spots, etc.)	111,287.78	111,287.78	111,287.78	333,863.35
World TB Day	10,671.43	10,671.43	10,671.43	32,014.29
TOTAL 5: Communication (E)	**121,959.21**	**121,959.21**	**121,959.21**	**365,877.64**
TOTAL willingness-to-pay (F=A+B+C+D+E)	**304,898.03**	**455,822.56**	**706,857.74**	**1,467,578.33**
Former government contribution (G)	2,259,706.97	2,412,155.44	2,659,506.26	7,331,368.67
Other state contributions				
Water and electricity	112,135.05	112,135.05	112,135.05	**336,405.16**
TOTAL 6: Water and electricity (H)	**112,135.05**	**112,135.05**	**112,135.05**	**336,405.15**
Infrastructure improvements	272,023.58	272,024.58	272,025.58	816,073.74
TOTAL: Infrastructure improvements (I)	**272,023.58**	**272,024.58**	**272,025.58**	**816,073.74**
TOTAL: Other state contributions (J=H+I)	**384,158.63**	**384,159.63**	**384,160.63**	**1,152,478.9**
TOTAL COUNTERPART + WILLINGNESS-TO-PAY (K=F+J)	2,948,763.63	3,252,137.63	3,750,524.63	9,951,425.90

c.

The financial data sources reported in this document are exhaustive, reliable, available and verifiable. The documents listed below are attached to the concept note:

- DAF_MSLS Funding: Malaria, TB and HIV and Health System of 24/10/14;
- Presentation in the Council of Ministers of 20 December 2014; Role no. 0001796;
- WHO Program Budget 2014-2015 / Budget Center: AF_CIV Côte d'Ivoire signed on 8 January 2014 by the Minister of Health.

The budget under willingness-to-pay will be covered in the budget of the MSLS. Through the operational action plan of the NTCP, the program director issues the commitments and executes them according to different endorsements by the competent services of the MSLS. Documentation (contracts, orders, invoices, receipts, etc.) associated with these costs is referred back to the NTCP. The latter makes this information

available to the CCM, which reports it to the Global Fund. It can also be checked with the MSLS Directorate of Financial Affairs and also through the Integrated Public Finance Management System (SIGFIP).

SECTION 3: FUNDING REQUEST TO THE GLOBAL FUND

This section details the request for funding and how the investment is strategically targeted to achieve greater impact on the disease and health systems. It requests an analysis of the key programmatic gaps, which forms the basis upon which the request is prioritized. The modular template (Table 3) organizes the request to clearly link the selected modules of interventions to the goals and objectives of the program, and associates these with indicators, targets, and costs.

3.1 Programmatic Gap Analysis

A programmatic gap analysis needs to be conducted for the three to six priority modules within the applicant's funding request.

Complete a programmatic gap table (Table 2) detailing the quantifiable priority modules within the applicant's funding request. Ensure that the coverage levels for the priority modules selected are consistent with the coverage targets in section D of the modular template (Table 3).

For any selected priority modules that are difficult to quantify (i.e. not service delivery modules), explain the gaps, the types of activities in place, the populations or groups involved, and the current funding sources and gaps.

The coverage levels of the quantifiable modules are estimated and justified in the programmatic gap table, Table 2, attached to this concept note. The coverage targets are:

1. Number of cases detected, TBAF, confirmed bacteriologically and clinically diagnosed (new cases and recurrent cases);
2. Percentage of HIV-positive patients screened for TB under a program for HIV control and treatment;
3. Percentage of patients with TB detected during the information communication period for whom the results of an HIV test appear in the TB case record;
4. Percentage of patients with TB who are registered as HIV-positive and benefiting from antiretroviral therapy during treatment for TB;
5. Number of cases bacteriologically confirmed as drug resistant (rifampicin-resistant TB and/or MDR-TB) reported to the NTCP;
6. Number of cases with drug-resistant TB (RR-TB and/or MDR-TB) that began second-line treatment

Modules chosen which cannot be quantified are: program management and Health Systems Strengthening (HSS) – monitoring and evaluation.

Program management

Types of activities currently in place: the current activities are mainly financed by the Global Fund Round 9 TB grant which ended in June 2015 but has been extended until the end of December 2015. These activities are:

- covering staff remuneration (salaries for staff recruited under the Global Fund grant and bonuses for public sector staff involved in managing the grant);
- capacity building for workers involved in program management;
- covering general running costs of the program (fuel; maintenance of medical equipment, rolling stock and computer equipment; office supplies; insurance for NTCP vehicles, motorbikes and premises; Internet; office equipment; telephone costs);
- annual financial audit of the Global Fund grant accounts;
- purchase of computer equipment;
- reproduction and dissemination of standards documents and management tools;
- request for technical assistance to strengthen management of the program interventions (Fiduciary Agent and recruitment of consultants to prepare standards documents).

Populations or groups involved: program staff at all levels, as well as Principal Recipients and sub-recipients (SRs) of the Global Fund grant.

Gaps:
- inadequate resources for continuity in management and coordination of the program, at all levels (human resources, equipment, general running costs, dissemination of standards documents and management tools);
- inadequate financial resources to continue running coordination meetings and review meetings;
- dilapidated state of some IT equipment and vehicles.

Gaps and current sources of funding: 91 percent
The funding gap for the NSP is 91 percent. However, the management costs essential for proper implementation of the program are EUR 3,079,371, of which EUR 224,917 is the above-allocation amount. The Global Fund is currently the main source of funding for this module.

HSS - monitoring and evaluation

Types of activities currently in place: the current activities are mainly financed by the Global Fund Round 9 TB grant which ended in June 2015 but has been extended until the end of December 2015. These activities are:
- review, reproduction and provision of materials for the management of TB;
- audit of data recording at treatment centers;
- running quarterly/six-monthly supervision sessions at the central and regional levels, including integrated supervision;
- running coordination meetings at the central and regional levels;
- running annual review meetings for TB control activities at the national and regional levels;
- carrying out studies (pharmacovigilance study, cost effectiveness of services, access to services, and equity.

Populations or groups involved: all staff at all levels of the health system, as well as Principal Recipients and sub-recipients of the Global Fund grant.

Gaps:
- inadequate resources for revision and dissemination of management tools for TB;
- insufficient capacity of TB TC teams for running TB coordination activities (preparing annual operational plans and monitoring implementation);
- inadequate equipment for storage of program data, in this context specific to monitoring and evaluation data and financial data;
- inadequate operational research focused on the program's needs.

Gaps and current sources of funding: 89 percent
The funding gap for the NSP is 89 percent. However, the costs relating to monitoring and evaluation activities are EUR 1,352,030, of which EUR 147,945 is the above-allocation amount. The Global Fund is currently the main source of funding for this module. This budget includes EUR 534,591 for HSS.

3.2 Applicant Funding Request

Provide a strategic overview of the applicant's funding request to the Global Fund, including both the proposed investment of the allocation amount and the request above this amount. Describe how it addresses the gaps and constraints described in questions 1, 2 and 3.1. If the Global Fund is supporting existing programs, explain how they will be adapted to maximize impact.

Logic on which this concept note is based

Reminder of Key Points

- Tuberculosis is highly prevalent in Côte d'Ivoire, with a rate of 215 per 100,000 inhabitants according to WHO estimates. [29]
- An increase in notified TBAF has been observed in virtually all regions of the country. Data in the NTCP information system indicate an increase in the rate of notification of cases of TBAF of 2.4 percent per year between 1990 and 2013. Certain districts (especially urban and suburban districts) have extremely high TB notification rates of around 300-500 new cases per 100,000 inhabitants.
- Sixty percent of cases of TBAF occur in Abidjan and the Abidjan region, where incidence is between 3.5 and 4.5 times higher than it is in other regions of Côte d'Ivoire.
- There are no epidemiological signs indicating that TB transmission is tending to decrease among the population.
- Some of the population has difficulty in accessing TB diagnosis services. On average, there is one TB microscopy laboratory to every 145,000 inhabitants across the whole country. However, in some urban and suburban districts, this ratio can reach one laboratory to every 400,000 inhabitants or even more.
- Among the population that has access to diagnosis and care services, a significant number of people are not assessed for TB when they should be according to NTCP criteria. NTCP data strongly suggest that when selecting patients suspected of having TB, those who most likely to have the disease are targeted. On average, one case of PTB+ is identified among barely six suspected TB cases.
- Some TTCs are overwhelmed by the demand for care for TB, especially TB diagnosis.
- According to recent WHO estimates, there is a 2.5 percent prevalence of MDR-TB among patients with TB who have never received any anti-TB drugs, and 13 percent among those who have been treated previously for TB. Significant capacities have been developed at the country level to care for patients who have MDR-TB. With wider use of Xpert tests, there will be more patients with MDR-TB who will seek treatment from health care facilities.
- Côte d'Ivoire is a country with a generalized and concentrated HIV/AIDS epidemic. According to UNAIDS, there are approximately 460,000 PLHIV in the country. Data from the 2010-2014 NTCP shows that on average, 25 percent of patients with TB who are tested for HIV are HIV-positive. The same data shows that this prevalence of HIV-positive cases is higher among patients with TB detected in Abidjan and its region (27 to 31 percent) compared to cases detected in other regions (16 to 21 percent).
- Joint TB/HIV co-infection control activities recommended by WHO are being implemented through the NTCP and the NACP (and co-financed by the Global Fund and PEPFAR). However, integration of the services provided by these two programs is not being implemented fully at health care facilities.
- Community actors play an important role in supporting and monitoring both TB patients and PLHIV. However, their involvement in joint TB/HIV control activities is not currently among the duties of HIV community counselors. In addition, community interventions benefiting vulnerable populations have not yet been implemented.
- The private sector, which accounts for 52 percent of all health care facilities in Côte d'Ivoire, is not currently involved in TB control.

In view of the aforementioned factors, the largest key populations who must be targeted in order to have an impact on the spread of TB among the general population, are: i) people who have difficulty accessing or have no access to health care and TB control services, and ii) PLHIV. However, at-risk groups at such as contacts of patients and underground miners and vulnerable populations such as children and prisoners will

[29] WHO Global TB Report (2014).

not be neglected in this concept note. This is because the interventions relating to them are currently inadequate and need to be strengthened.

To ensure the best care services and TB control for all patients with TB, including those who are infected by HIV, the NTCP should improve its management capacities, including its monitoring and evaluation (M&E) system. The skills of health care actors and CHWs involved in TB control also need to be strengthened.

Therefore, the goal and objectives of this concept note are to remedy the TB control inadequacies described above, to consolidate and strengthen the achievements of the NTCP and to improve this potential in terms of program management.

This goal and these objectives are entirely consistent with those of the NSP 2016-2016 for TB control in Côte d'Ivoire and are as follows:
Goal:

- Contribute to achieving the target for the national TB control strategy specified in the 2016-2020 NSP, that is: a 20 percent reduction in mortality associated with TB by 2020 compared to 2015.

Objectives:

1. To increase detection of cases of TBAF from 23,750 in 2014 to 26,773 in 2017 and achieve a treatment success rate of at least 86 percent by 2017;
2. To increase the proportion of TB patients who are tested for HIV from 93 percent in 2014 to 100 percent in 2017 and increase the proportion of patients with TB/HIV who are treated with ARVs from 67 percent in 2014 to 90 percent in 2017;
3. Increase the treatment success rate from 56 percent of patients affected by MDR-TB treated in 2011 to 80 percent of those treated in 2017 ;
4. To improve and strengthen the technical, management and coordination capacities of the NTCP.

To achieve these objectives, the strategic interventions and the activities included in the following modules will be developed and implemented within the context of this Global Fund concept note:

Module 1: TB treatment and prevention;
Module 2: TB/HIV;
Module 3: Multidrug-resistant tuberculosis (MDR-TB);
Module 4: Program management;
Module 5: HSS − Monitoring and evaluation.

The amount of the budget for the concept note is EUR 12,629,991.

Module 1: TB treatment and prevention

With the goal of improving implementation of testing and treatment services for TB in Côte d'Ivoire:

- the achievements in terms of TB control services made by the NTCP in the 160 TB TCs and TTCs should be maintained, consolidated and strengthened, particularly in areas where the death rate remains high;
- TB diagnosis capacities will be expanded within the network of health districts, especially in those which are under-equipped with smear microscopy laboratories and/or which have death rates of 12 percent among patients to whom TB treatment is administered;
- identification and treatment of patients who have TB symptoms should be improved, especially at basic health care facilities, so that the proportion of PTB+ cases among patients suspected of having TB falls from 17 percent in 2013 to 5 percent in 2017, and so that the number of patients with suspected TB who are identified and assessed increases from 95,259 in 2013 to 364,645 in 2017;
- TB diagnostic services should be provided to all patients including those who consult health providers other than those that fall under the MSLS and those who belong to high-risk groups and vulnerable populations;
- treatment should be accessible and provided for all patients who have been diagnosed with TB with a view to curing them;

- the network of community actors will support diagnostic and treatment services.

Intervention 1.1: Testing for and diagnosing TB

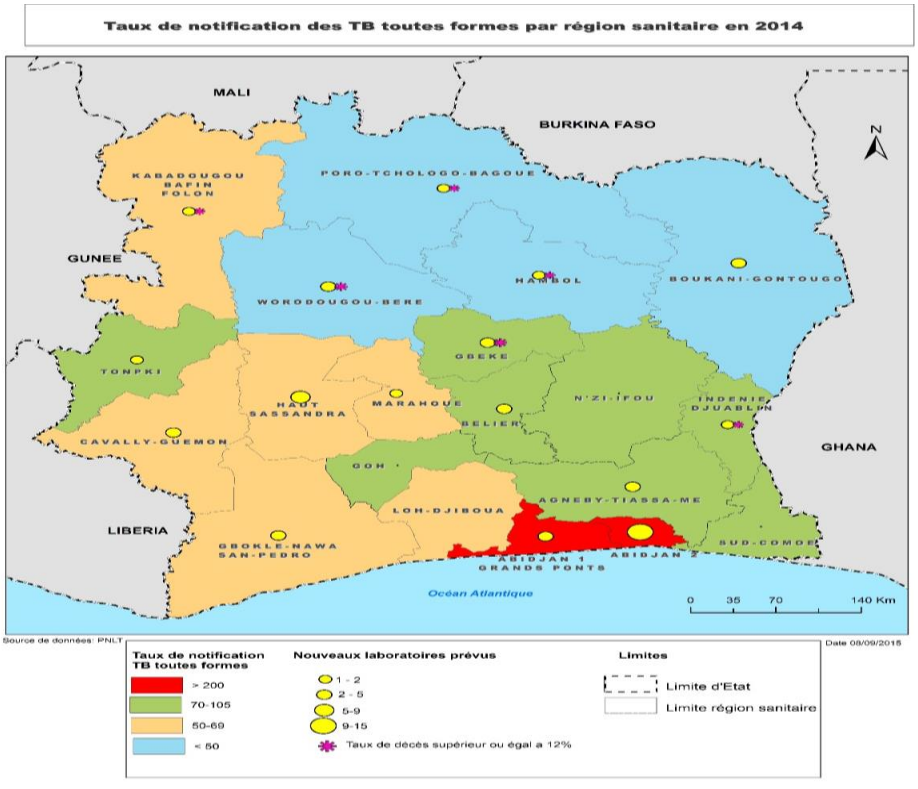
Firstly, existing TB diagnostic capacities must be consolidated and strengthened and the network of TB laboratories expanded. The NTCP plans to set up 62 new microscopy laboratories in 29 districts located across 16 regions. They will be selected according to the following criteria:

- No laboratory/TTC
- One laboratory to more than 200,000 inhabitants
- Death rate among TB patients put on treatment ≥ 12 percent.

It is important to note that the new TTCs will, as far as possible, be created within health centers which are already providing care services to PLHIV (see Appendix 4).

Expanding the network of laboratories and TTCs

1.1.1 Renovate health care facilities in order set up the 62 new laboratories.
1.1.2 Procure 62 microscopes for the 62 new laboratories.
1.1.3 Train 62 health workers (initial training) in TB microscopy for the new laboratories (included in the budget for activity 1.1.18).
1.1.4 Supply the consumables and reagents necessary for the TB microscopy activities for the 62 new laboratories (included in the budget for activity 1.1.6)
1.1.5 Extend external quality control for activities to the 62 new laboratories (covered by supervision; activity 5.2.1).



Map: Notification rate of TBAF per health region in 2014
[Key - left to right]: Notification rate of TBAF
New planned laboratories
[Pink] Death rate above or equal to 12 percent

Borders: State border, Health region border

REGIONS/DISTRICTS	Number of TTC laboratories	Ratio of TTC laboratories per population	TB notification rate (2014)	New TTC laboratories-to be set up
ABIDJAN 1-GRANDS PONTS	13	177,812	278	5
ABIDJAN 2	7	423,355	213	13
AGNEBY-TIASSA-ME	6	230,791	81	5
BELIER	4	184,522	91	3
BOUNKANI-GONTOUGO	7	155,206	44	3
CAVALLY-GUEMON	9	129,383	60	3
GBEKE *	6	209,557	94	4
GBOKLE-NAWA-SAN-PEDRO	21	102,972	58	5
GÔH	5	168,310	79	2
HAMBOL *	5	83,454	48	1
HAUT SASSANDRA	6	276,899	69	8
INDENIE DUABLIN *	6	101,969	78	1
KABADOUGOU-BAFING-FOLON *	9	62,286	54	1
LÔH-DJIBOUA	9	117,447	66	0
MARAHOUE	5	171,972	63	2
N'ZI-IFOU	9	109,165	88	0
PORO-TCHOLOGO-BAGOUE *	14	102,917	41	1
SUD-COMOÉ	6	118,688	103	0
TONKPI	9	119,494	76	2
WORODOUGOU-BERE *	4	146,639	23	3
CÔTE D'IVOIRE TOTAL	160	145,000	106	62

* : Region with a death rate among TB patients under treatment of ≥ 12 percent

1.1.6 Supply laboratory consumables and reagents necessary for microscopy activities to diagnose TB in the 222 laboratories (see the 160 existing laboratories and the 62 new laboratories).

1.1.7 Consolidate and strengthen external quality control (EQC) of microscopy activities in the 160 TB laboratories (covered by activity 5.2.1).

1.1.8 Procure 16 microscopes to replace 10 percent of microscopes at the 160 existing laboratories.

1.1.9 Procure 17,777 cartridges for 2016 and 21,201 for 2017 (covered by activity 3.1.1).
There are potentially 15 GeneXpert machines in Côte d'Ivoire: six are already operational at some TB TCs, one machine is operational at the Research and Diagnosis Center for AIDS (CeDReS); eight machines are currently being procured by the NTCP with support from PEPFAR). There is no plan to acquire additional GeneXpert machines. However, cartridges for testing samples in GeneXpert machines will be procured through this concept note. The number of cartridges will be determined according to the estimated number of patients to undergo this test.

1.1.10 Fifteen GeneXpert machines calibrated each year.

1.1.11 Supply consumables for cultures and drug sensitivity tests at the NRL and CeDReS (budget included in activity 3.1.2).

1.1.12 Transport samples both to the health care facilities that carry out tests on GeneXpert machines and also to the NRL and CeDReS.

1.1.13 Maintain the equipment of the laboratory network, including that of the NRL and CeDReS, and radiology machines (sign a contract with a maintenance company).

1.1.14 Train four health care professionals, including two employed at the NRL/CeDReS and two employed in TC laboratories, in the international course on mycobacteriology applied to NTCPs (Benin).

1.1.15 Supervision visits to the NRL and CeDReS every six months by the supranational reference laboratory for TB in Milan.

1.1.16 The cost of transporting strains of mycobacterium TB cultivated in the NRL and the laboratory of CeDReS to the Milan supranational laboratory will be covered.

1.1.17 Provide TCs with radiology supplies (film, fixer and developer).

Creation of new TCs and TTCs

- Sixty-two new TTCs will be created. Sixty-two primary health care facilities will house these TTCs. To this end, one TB microscopy laboratory will be created in each of them (see activity 1.1.1). One of these TTCs will be created at the Centre La Croix Bleue, which is a national addiction treatment center (hard drugs, alcohol and tobacco) that also tests for HIV.

1.1.18 Three health care professionals per new TTC will be trained to treat TB cases.

- Capacity building of five existing TTCs so that they can become TCs. Each of them will run NTCP activities within a coordination area that includes several TTCs. Staff have already been trained for this purpose.

Expansion of testing and treatment activities at primary health care facilities

The testing and treatment activities will be set up at 480 primary health care facilities. They will be set up as follows:

i. priority will be given to districts and regions with the highest death rates among TB patients under treatment;
ii. each of the existing 160 TTCs and TCs will select three peripheral health care facilities according to the level of demand from the population and the availability of health workers (Annex 2).

To this end, the following actions will be undertaken:

1.1.19 Reproduce and distribute the plan for the identification and treatment of TB patients (covered by activity 5.1.1).

1.1.20 Develop and print out a register in which patients identified as suspected of having TB will be recorded (covered by activity 5.1.1).
The register will be introduced in peripheral centers and primary care centers, including the TTCs.

1.1.21 Refresher training for health workers at the 160 TTCs which already provide TB control services.

1.1.22 Hold one-day training sessions for two health workers per primary health care facility (three primary health care facilities around a TTC).
These facilities will be chosen on the basis of the above criteria, especially the high death rate among TB patients under treatment. Here also, the use of the plan and the register of suspected TB cases will be explained during the training.

- The process of identifying and treating patients suspected of having TB will be systematically evaluated during supervision visits by:
  - Calculating the number of patients suspected of having TB who are recorded in the register of suspected cases;
  - Comparing their surnames and first names and other identifying details with those of suspected TB sufferers who are registered at the laboratory of the TTC; this will make it possible to calculate the number and proportion of identified suspected cases whose sputum has not been tested;
  - Calculating the proportion of PTB+ cases among suspected cases who have had a smear microscopy test.
- The death rate among TB cases under treatment will be systematically validated and discussed during quarterly meetings held in districts known to have high rates.

<u>Intervention 1.2: Involvement of other health sectors in activities</u>

Collaboration with the private health sector

- A meeting between the General Director of Health of the MSLS and representatives of the Medical Council of Côte d'Ivoire will be held. This meeting will focus on: i) TB and the TB control situation in the country, ii) the current level of involvement of the private health sector in TB control in Côte d'Ivoire, and iii) the readiness of the NTCP to cooperate with doctors in this sector to treat suspected TB patients and to treat and follow up the TB patients that they refer to it.
- An ad hoc committee will be created and made up of representatives of the National Medical Council and the managers of the NTCP's Central Unit. This committee will prepare a memorandum specifying the situation of TB and TB control in Côte d'Ivoire, the potential role of private sector doctors in TB control and the readiness of the NTCP to treat, within its own network, confirmed or suspected TB cases. The directory, by region and district, of all TCs and TTCs of the NTCP with their identifying

details will be attached to this document. This memorandum will be signed by the President of the National Medical Council and sent to all private sector doctors. The private health sector will be represented within the Scientific Support Group for TB Control in Côte d'Ivoire.

1.2.1 Three meetings between the NTCP and the Association of Doctors at Private Clinics, the National Union of Senior Health Care Managers of Côte d'Ivoire and the Ivorian Pulmonary Tuberculosis Society will be held.
The topics that were presented and discussed during the meeting held with representatives of the Medical Council will be presented and discussed during each of the three meetings.
With the support of the Central Unit of the NTCP, the secretariats of each of these three organizations will write a newsletter which will be distributed to their members; this newsletter will briefly outline the TB control situation in Côte d'Ivoire and underline the readiness of the NTCP to cooperate with private sector doctors. Each newsletter will be accompanied by the directory, by region and district, of all TCs and TTCs.

- Copies of the National TB Control Guide will be distributed in large numbers through the network of TCs and TTCs.

1.2.2 Six symposia for health workers in the private sector from Abidjan (two), Bouaké (one), Man (one), Gagnoa (one) and Abengourou (one) will be held.
Symposia will last for between three and four hours and will focus in particular on the identification of suspected TB cases and referral to NTCP facilities for treatment. The various NTCP guides will be made available to the participants in each symposium.

- At least one session on the issue of TB in Côte d'Ivoire will be included in the program for each conference or congress held by each of the three professional health organizations.
- The topic of TB and TB control in Côte d'Ivoire will be strengthened in postgraduate annual teaching programs of the National Union of Senior Health Care Managers of Côte d'Ivoire.

1.2.3 A poster describing the current NTCP procedure for identifying and treating people suspected of having TB will be developed, reproduced and distributed.

1.2.4 A triplicate referral/counter-referral book will be developed, printed and distributed to private sector health workers.
This book will be made up of the following three parts: the original page will be used by the private sector doctor to refer suspected cases to the TTC or TC, the first counterfoil will be used by the TC or TTC to report back to the private sector doctor, and the second counterfoil will be retained by the private sector doctor.

- Assessment of the involvement of the private sector in TB control activities will be included in supervision at a limited number of private health care facilities.

1.2.5 Treatment of TB patients at four large private clinics in Abidjan affiliated with the Strengthening Health Outcomes through the Private Sector project[30] (SHOPS) will be assessed (funded by United States Agency for International Development [USAID]).

- This project has been implemented in order to treat PLHIV within the private sector. The operational research study will make it possible to assess the quality and level of involvement of private health care facilities in care and TB control services and opportunities to integrate care services for co-infected TB/HIV patients with care and TB control services in the context of Côte d'Ivoire.

Traditional medicine

1.2.6 Refresher training will be provided to the 150 traditional healers who are already involved in the referral of suspected TB cases.

Other health care sector

- The cooperation with the health care units of the eight commercial and industrial companies that are involved in TB control efforts will be maintained.
- The TB testing and treatment activities will be developed within the mining sector. A meeting between the NTCP and the heads of the health departments of mining companies will be held in order to explain the issue of TB in Côte d'Ivoire and among the population of miners. A cooperation agreement will be signed between the NTCP and each mining company.

1.2.7 A three-day training session will be run for 25 health care professionals who work at the health units of the largest mining companies.

[30] REFERENCE for SHOPS Project

- The health unit of each mining company will be linked to the nearest TTC or TC, which will provide it with microscopy examinations of samples, drugs for miners with TB, and supervision.

1.2.8 Systematic and active TB testing for underground miners will be organized once every three months.

Intervention 1.3: Other: High-risk groups and vulnerable populations

PLHIV

- Interventions and activities concerning PLHIV are specified under Module 2.

Contacts of patients

Testing of contacts of patients is included in the national TB control strategy. However, there are no clear guidelines as yet on how to implement this intervention. To this end, the following actions will be undertaken:

- A procedural document for the systematic screening of contacts of patients will be prepared in accordance with the latest WHO recommendations[31]. This document will:
  - identify the TB index case around whom the systematic screening survey will be carried out;
  - specify the contacts of patients who will be systematically and actively screened for TB;
  - specify the standardized procedures and their algorithms to be used for the systematic screening and assessment of the contacts of patients;
  - describe the role of the human resources who will be involved in the screening surveys (role of health care professionals at TTCs, peripheral centers, CHWs, community counselors);
  - state how the implementation of systematic screening of contacts of patients will be monitored and evaluated; and
  - specify the indications for the IPT that will be provided in connection with the screening surveys for contacts of patients.

1.3.1 The document on systematic screening of contacts of patients will be printed and distributed (covered by activity 5.1).

1.3.2 Health care personnel and CHWs will be trained on systematic screening of contacts of patients (activity included in initial training and refresher training)

The role of CHWs in identifying and referring contacts of patients will be clearly specified. Training on contact subject screening will be integrated into all training provided by the NTCP as far as possible.

- A form for surveys around index cases to generate the following information will be developed: i) proportion of index cases surveyed, ii) proportion of identified contacts of patients who are screened for TB, iii) contribution in percentage terms made by systematic screening of contacts of patients to the detection of all notified TB cases, iv) proportion of children aged under 5 years put on IPT who have completed their treatment.

Children and adolescents (aged under 15 years)

The proportion of TB cases in children and people aged under 15 years is barely 5 percent of all notified TB cases in Côte d'Ivoire[32]. Since there are no epidemiological signs suggesting a clear decrease in transmission of the disease among the population (see section 1.1), it is highly likely that TB in children and adolescents is under-diagnosed.

- A National Committee for Tuberculosis Control in Children and Adolescents (CNLATEA) will be established under the auspices of the Scientific Support Group for TB Control in Côte d'Ivoire. The NTCP, pediatricians (including representatives of the Ivorian Pediatrics Society), university pulmonary TB specialists, at least one radiologist, representatives of the National Maternal and Child Health Program, health workers at TB TCs, TTCs and primary health centers, and representatives of NGOs involved in improving maternal and child health will all be part of this committee. CNLATEA will develop national guidelines to improve the prevention and control of TB in children and adolescents in Côte d'Ivoire.

1.3.3 The national guide and supporting documents (algorithm and poster) for the prevention and control of TB in children and adolescents will be developed, validated and reproduced.

[31] World Health Organization. Recommendations for investigating contact-persons with infectious tuberculosis in low- and middle-income countries. WHO, Geneva. 2012; WHO/HTM/TB/2012.9.

[32] NTCP data

They will be developed in accordance with the guidelines laid down by CNLATEA and the latest WHO recommendations[33]. The guide will include algorithms to facilitate the use of the guide at health care facilities. It will also include a component concerning: i) systematic TB screening for contacts of patients where priority must be given to children, and ii) IPT.

1.3.4 During a two-day training session, 222 health care professionals at TTCs and TCs and 60 pediatricians will be trained to prevent and treat TB in children and adolescents.
This training will include the component concerning screening of contacts of patients and IPT.

1.3.5 Pediatric TB drugs and simple Isoniazid tablets in pediatric doses will be provided for preventive treatment of children aged under 5 years who have been exposed to index cases but are free from active TB (covered by activity 1.4.1).

- The implementation of child and adolescent TB control prevention and control activities will be monitored during supervision visits. Data will be collected, compiled and analyzed in accordance with the current guidelines in the NTCP information system, including data concerning IPT for children aged under 5 years who have come into contact with an index case but are free from progressive TB.

Prisoners

In view of what has already been implemented at the 22 MACs (see section 1, sub-section 1.1); paragraph 1.1.1b), the following actions are planned:

- A framework for cooperation between the NTCP and the Department of Penitentiary Services of the Ministry of Justice will be established for TB control at all MACs in Côte d'Ivoire. This framework for cooperation will specify the role of each partner in this effort. Standard operating procedures for TB prevention, care and control in prisoners will be developed in accordance with the NTCP guidelines and printed.

1.3.6 One nurse and two peer educators at each of the 12 MACs which are not yet involved in NTCP activities will be trained.

- The NTCP, through the TCs and TTCs, will provide the health units of the 34 MACs with sputum sample containers, laboratory reagents (for the Abidjan MAC), TB drugs and components of the information system that is in place within the NTCP. The health unit at the Abidjan MAC will be included in the microscopy quality control system established by the NRL (Institut Pasteur-Côte d'Ivoire).

1.3.7 Samples collected at MACs without a laboratory will be sent to the laboratories of the nearest TTCs and TCs, with the involvement of NGOs.

- Systematic TB screening will be performed for: (i) all new arrivals in prisons and (ii) all individuals who are imprisoned in the same room or cell as a prisoner who has been diagnosed with TB. HIV testing will be carried out, in cooperation with the NACP, for all prisoners who are diagnosed with TB. In addition, systematic TB screening will be performed for all prisoners who have HIV. Prisoners identified as being co-infected with TB and HIV will be treated with co-trimoxazole and ARVs in accordance with NTCP guidelines.

1.3.8 TB control activities pursued by the health units of MACs will be supervised by TCs and the Central Unit of the NTCP.

- NGOs that work in prisons and local NGOs that work within communities will be involved in social support for prisoners who are released while still undergoing TB treatment (see Intervention 1.5, Community intervention in TB treatment).

Women

- With the adoption of Option B+ by the NACP for PMTCT (permanent tritherapy for HIV-positive pregnant women), active TB case-finding will be strengthened in maternal and infant health services. The issue of TB in women, including its TB/HIV co-infection dimension, will be highlighted during all training sessions run by the NTCP.

1.3.9 Ninety community counselors from NGOs involved in PMTCT will be trained in TB control (three one-day sessions).

[33] World Health Organization. Guidance for national tuberculosis programs on the management of tuberculosis in children. Second Edition. WHO, Geneva, 2014. http://www.who.int/tb/publications/childtb_guidelines/en/

- TB prevention, care and control activities will be promoted to NGOs which are involved in maternal and infant health programs or which work within maternity units and birthing rooms. These activities will also promoted to NGOs which are in contact with sex workers (SWs); members of these NGOs will also be trained. SWs will be made aware of the issue of TB. The costs of these activities will be covered by the Global Fund grant for HIV.
- The Scientific Support Group for TB Control in Côte d'Ivoire will regularly invite a representative of the Ministry of Solidarity, the Family, Women and Children to its meetings.
- Data will continue to be collected by sex and age group, in accordance with NTCP guidelines, and will be analyzed at all TTCs and TCs. In accordance with current procedures, this analysis will highlight the issue of TB, including extra-pulmonary TB (EPT), in women and adolescents.

Diabetics

The National Program for the Prevention of Metabolic Disorders (PNPMM), which was created in 2007, provides services at 27 referral health care facilities across the country, 11 of which are in Abidjan. In order to involve them in efforts to identify TB sufferers, the following activities are planned:

1.3.10 Health care professionals at the 27 referral centers for diabetics will be trained to identify and treat TB cases.

- Training on diabetes in TB patients for health care professionals who work at NTCP facilities will be (i) included on the agenda for training sessions that are organized in relation to basic aspects of TB control; (ii) provided during supervision visits; (iii) strengthened during the quarterly meetings that are normally held at TCs and TTCs.

Inhabitants of shanty towns and areas with high notification

1.3.11 A quarterly door-to-door awareness-raising and referral campaign will be carried out in order to identify suspected TB sufferers in shanty towns of the city of Abidjan and San Pedro and in the 22 health districts with a notification rate of between 70 and 105 TB cases per 100,000 inhabitants per year (see Annex 5).
These campaigns will be run according to the origin of TB patients registered at TTCs and TCs which report the highest levels of notified incidence.

Underground miners exposed to silica dust

- (See activities 1.2.14 above in "Other health care sector", in "Intervention 1.2", in Module 1).

Intervention 1.4: Treatment of sensitive TB

1.4.1 First-line TB drugs will be supplied in order to treat 25,594 patients in 2016 and 26,773 in 2017.
Pediatric TB drugs will be procured for 6 percent of new TB cases (see activity 1.4.1). A simple formulation of isoniazid will also be procured for preventive treatment of children who have been exposed to an index case but are free from active TB. Treatment will be provided to patients in the place that is most convenient for them, including: TCs, TTCs, peripheral health care facilities or through networks of CHWs and NGOs.

1.4.2 The cost of supplying drugs (international transportation, transit and management costs) will be covered.

1.4.3 The costs of storage, distribution and quality control (post-marketing) for first-line drugs will be covered.

1.4.4 A payment of EUR 5 will be given per patient who is successfully treated (TBAF excluding MDR-TB).

Intervention 1.5: Community intervention in TB treatment

The community component of this concept note will supplement the arrangements that have already been put in place through the HIV grant. A total of 186 community counselors who are already in post as a result of the HIV grant (person responsible for care and support and PMTCT support) will be involved in TB control. Through this concept note, 250 new counselors will be recruited to support TB patients and contribute to efforts to screen TB patients for HIV. Both types of counselors will contribute to an increase in case notification.

- Cooperation between the NTCP and the community PR will be strengthened through a framework of quarterly consultation. Its role will be:

i) Validating and breaking down operational guidelines for implementation and scale-up of TB control activities, including indicators to monitor community interventions;
ii) Validating the training modules for CHWs and community counselors and data the collection tools;
iii) Promoting the involvement of NGOs working in the field of HIV, maternal and child health, etc. in TB control;
iv) Promoting the involvement of former TB patients in the network of TB control NGOs;
v) Monitoring and evaluating program performance. The community indicators will be integrated into the NTCP M&E system.

The guidelines and training modules will be finalized with technical assistance.

1.5.1 Quarterly consultation meetings of the NGO and NTCP will be held (one-day workshop for 15 participants in Abidjan).

1.5.2 The operational guidelines for the implementation and scale-up of community TB control activities and the training modules for community workers, including M&E tools, will be developed, validated and reproduced.

- The NTCP plans to decentralize identification of suspected TB cases and monitoring of treatment to an average of three peripheral health centers for each TTC (480 primary health care facilities). This allocation will occur at the district level with priority being given to TTCs that have the highest death and LTFU rates. There will be two CHWs for every peripheral health center, making a total of 1,065 CHWs.

1.5.3 Monthly meetings to validate data concerning community activities will be held.
These meetings will be held at each TTC/TC between CHWs/community counselors and the health team. Data validation concerns: i) the number of sufferers of TBAF who have been referred by CHWs and ii) treatment outcomes for patients who have received community support.

- At urban TCs and TTCs, 250 community counselors (three for each TC and TTC) will: i) provide support through education to ensure treatment compliance, ii) identify and refer suspected TB cases to TCs and TTCs, iii) provide awareness-raising at people's homes in shanty towns in the big cities, iv) seek suspected TB cases at health care facilities, v) make home visits and contribute to systematic TB screening surveys in relation to contacts of patients, and vi) identify and restart treatment for patients who do not comply with or drop out of treatment.
  Particular attention will be paid to areas covered by TTCs which have the highest death rates among TB patients under treatment. Monthly community data validation meetings will be held with the nurse from the TC/TTC and the laboratory technician.

1.5.4 One-day refresher training sessions will be run for the 960 CHWs who work in rural areas in 2016, and 105 will be run in 2017.

1.5.5 In 2016, 201 new community counselors will be trained in TB case management (three-day session), and 49 will be trained in 2016.

1.5.6 Performance bonuses will be given to the 960 CHWs in 2016 and the 1,065 CHWs in 2017 during meetings for monthly report validation by the TTC.

1.5.7 Performance bonuses will be given to the 250 community counselors during meetings for monthly report validation by the TTC.

1.5.8 The CHWs and community counselors will be coached by the 17 NGOs that coordinate activity in TCs (SSR; sub-subrecipient).

1.5.9 The CHWs will be provided with 250 replacement bicycles in order to facilitate the implementation of their intervention package. Maintenance of bicycles is also planned, including those procured during Global Fund Round 9.

1.5.10 Seventeen motorcycles and accessories will be procured for the NGOs that coordinate activities at TCs.

1.5.11 The 1,315 CHWs/community counselors will be provided with 1,315 working kits (rucksacks, caps, leaflets, T-shirts and badges).

1.5.12 A communication package will be provided to the 250 community counselors in order to help them seek patients do not comply with treatment and those who do not attend regularly.

1.5.13 The communication tools (image boxes, posters and leaflets) for the awareness-raising activities will be reproduced and distributed.

1.5.14 Home visits to TB patients under treatment will be made, with priority being given to districts with high death rates.

1.5.15 A TB control advocacy day will be organized annually in cooperation with COLTMR (50 participants, Abidjan).
This day will also be used in order to attempt to increase resource mobilization for TB control.

1.5.16 World Tuberculosis Day will be marked each year (community villages).

Table 4: TB treatment and prevention

	2014 (baseline)	Allocation (EUR)	2016	2017
Number of notified cases of tuberculosis	23,750	Allocation	2,648,743	3,328,826
		Above-allocation amount	7,622	7,622

Module 2: TB/HIV

Intervention 2.1: Concerted TB and HIV control interventions

The NTCP, NACP and community actors plan to conduct activities which will make it possible to do the following during implementation of the concept note (2016-2017):

- revitalize partnership mechanisms at all levels of the health system;
- strengthen active screening and diagnosis of TB in PLHIV ;
- screen all TB registered patients for HIV by 2017;
- provide ART to 90 percent of co-infected TB patients in 2017;
- implement TB control measures at 20 health care facilities which provide both TB and HIV treatment per year.

Strengthen partnership mechanisms existing since 2010 at all levels of the health system by coordinating the different actors

2.1.1 Continue to hold meetings at the central level of the TB/HIV TWG.
2.1.2 Revitalize technical working groups at the regional level (funded by PEPFAR).
2.1.3 Promote the issue of TB/HIV co-infection at meetings of the District Management Teams (funded by PEPFAR).
2.1.4 Make supervision visits to health workers at the TTCs that are performing worst in terms of provision of TB/HIV co-infection care services (funded by PEPFAR).
2.1.5 Hold six-monthly meetings to share experience and good practice which will be attended by health workers from the best-performing and worst-performing joint TB/HIV treatment sites (cost to be covered by PEPFAR).

Increase TB screening and improve treatment for PLHIV

- Refresher training for staff at the 603 health care facilities that treat PLHIV will be arranged in relation to identifying PLHIV who need to be actively screened for TB. To this end, two health workers per health care facility will be given one day's training. The training will be provided on a cascade basis during the course of 2016. The cost of this training will be covered by PEPFAR, except for the Sud-Comoé region which will be covered by the NACP (because it is not supported by PEPFAR).

2.1.6 A poster targeted at health care professionals working at sites where PLHIV are treated will be developed, reproduced and distributed (budget covered by activity 5.1.1).
This poster will serve as a reminder for active TB case-finding in PLHIV.

2.1.7 Training on TB and TB/HIV co-infection will be given to 186 HIV community counselors involved in HIV/AIDS control (one-day session).
The TB community intervention package will be integrated into the activities of community counselors who are involved in HIV/AIDS control. This activity will be pursued in the four SRs receiving HIV funding from the Global Fund for NGOs, RIP+ (Ivorian Network of Organizations for People Living with HIV), CSAS (Center for Solidarity and Social Action), APROSAM (Association to Promote the Health of Women, Mothers, Children and Families) and HACI (*Heartland Alliance* Côte d'Ivoire), at

no additional cost. The HIV community counselors will help the health centers to collect information regarding the number of PLHIV who have undergone active TB case-finding and the number of TB sufferers identified.

Strengthen systematic and active screening for TB in PLHIV.

The NACP estimates that around 370,000 and 400,000 PLHIV will receive treatment at health care facilities in 2016 and 2017 respectively. According to NACP data, in 2014, 270,635 PLHIV received care and 135,318 of them (i.e. 50 percent) benefited from systematic screening for TB. Once training has been provided (as described above) and the systematic TB screening form has been incorporated into the new monitoring files for PLHIV at health care facilities, 80 percent of the PLHIV monitored will benefit from systematic TB screening in 2016 and 90 percent will benefit in 2017.

The package of community activities to control TB and co-infection will be included in the remit of organizations that control HIV and treat key populations.

All PLHIV diagnosed with TB will be properly treated and monitored by NTCP services (see Module 1; intervention 1.4).

Strengthen HIV screening and improve HIV treatment for TB patients

2.1.8 The staff of the 62 new TTCs will be trained in HIV counseling and treatment (budget covered by activity 1.1.18).
Three workers per TTC will be given three days' training. To this end, two training sessions will be run in 2016.

2.1.9 The nurses at the 205 TTCs (143 existing + 62 new) will be trained to prescribe and administer ART (funded by the NACP).
One nurse per TTC will be given five days' training. This training will be delivered and funded by the NACP/PEPFAR in 2016.

2.1.10 HIV screening tests for TB patients will be supplied (funded by the NACP).
This will make it possible to carry out an HIV test for all TB patients identified in 2016 and 2017.

2.1.11 Co-trimoxazole will be supplied to the TCs and TTCs to prevent opportunistic infections in co-infected TB/HIV patients (by PEPFAR).
Co-trimoxazole will be provided to 85 percent of the HIV-positive TB patients identified in 2016 and 90 percent of those who will be identified in 2017.

2.1.12 The TCs and TTCs will be supplied with ARVs to treat co-infected patients (funded by PEPFAR/NACP).
It is expected that 80 percent of the co-infected TB/HIV patients identified will be put on ART on 2016 and 90 percent in 2016.

- At health care facilities that provide TB care and control services, the community counselors will pursue systematic counseling activities to promote HIV testing for suspected or confirmed TB cases. This activity is included in the package of services of the community PR.
- Through the community network, care and support activities which form part of the positive health, dignity and prevention package will be pursued for co-infected TB/HIV patients. Nutritional and psychosocial support will also be implemented, as will the strategy known as the "family approach" to identifying and supporting orphans and children who have been made vulnerable by HIV (OVC: orphans and vulnerable children). This activity is covered by the NACP.

Intervention 2.2: Infection control

2.2.1 Each year, a situational analysis of infection control will be carried out at 20 sites which treat TB and HIV/AIDS (funded by PEPFAR).
These sites will be selected from among the TCs and TTCs that treat the most co-infected patients.

2.2.2 Two health care professionals (a doctor and a nurse) per site at 40 assessed sites will attend a five-day training session (funded by PEPFAR).

2.2.3 Minor restoration works will be carried out at the 40 assessed sites in order to implement infection control measures (funded by PEPFAR).
This activity will be implemented in cooperation with the Department of Infrastructure, Equipment and Maintenance (DIEM). A standard architectural plan for health care facilities is currently being implemented by an international consultant in cooperation with the DIEM with financial support from PEPFAR.

2.2.4 The 40 assessed sites will be provided with infection control kits (hygiene kit, surgical masks, respiratory protective equipment, pedestal fans, air extractor) and equipment for the management of medical waste according to their requirements.

Table 5: Amount (in EUR) TB/HIV module

	2014 (baseline)	Allocation (EUR)	2016	2017
Number of TB/HIV cases	5,522	Allocation	130,549	16,596
		Above-allocation amount	-	-

MODULE 3: Multidrug-resistant tuberculosis (MDR-TB)

Intervention 3.1 MDR-TB detection and diagnosis

In accordance with the NTCP guidelines, GeneXpert tests will be carried out for TB re-treatment cases, PLHIV who have TB symptoms, new cases of PTB+ whose smears remain positive in the second month of treatment and contacts of patients of patients who have MDR-TB. Patients who are identified as being resistant to Rifampicin will be treated with second-line drugs and their samples will be sent for a drug sensitivity test at one of the national laboratories (NRL and CeDReS). It is expected that the number of patients with MDR-TB who will be treated will be 489 in 2016 (i.e. 90 percent of identified cases) and 576 in 2017 (i.e. 100 percent of identified cases). Treatment will be provided on an outpatient basis for the majority of patients at TCs.

Supply of consumables for molecular pathology and sensitivity tests

3.1.1 Cartridges for GeneXpert tests for the 15 GeneXpert machines will be supplied (17,777 cartridges for 2016 and 21,201 for 2017).
3.1.2 The NRL will be provided with supplies for cultures, drug sensitivity tests (first-line and second-line) and LPA.
3.1.3 Iceboxes and batteries to transport sputum samples from suspected MDR-TB cases will be provided to 222 TCs/TTCs.

Intervention 3.2: Treatment of multidrug-resistant tuberculosis (MDR-TB)
Treatment will be organized as follows:

3.2.1 The specialist center in Adzopé will be renovated and equipped to treat MDR-TB and XDR-TB (activity co-funded by the government and the Global Fund).
A health care facility in Adzopé has been identified so that all MDR-TB patients who require hospitalization can be hospitalized there.[34] This facility will have 24 beds for MDR-TB patients whose clinical condition has worsened and who cannot be treated as outpatients. This hospital facility requires:
- Restoration and repair works for infection control;
- Procurement of equipment: patient beds, laboratory equipment, including a GeneXpert machine, radiology equipment, and computer and office equipment.

3.2.2 One training session on MDR-TB treatment will be provided (doctors, nurses and laboratory technicians) for 30 people.
3.2.3 The costs of pre-treatment assessments and monitoring for the 1,065 MDR-TB patients and 10 XDR-TB (extensively drug-resistant TB) patients will be covered.

[34]It is important to remember that treatment will be provided on an outpatient basis for the majority of patients at TCs.

Like the recent agreement that was reached with the Pasteur Institute of Côte d'Ivoire, agreements will be signed with other facilities that are able to perform pre-treatment assessments. These facilities will be identified and approached in advance, both in Abidjan and outside it.

3.2.4 Second-line drugs will be procured in order to treat 489 MDR-TB cases in 2016, 576 in 2017 and 10 XDR-TB cases for both years.
The Union's nine-month treatment regimen will be used for MDR-TB cases; this is made up of: four months of KmMfxPtoHCfzEZ followed by five months of MfxCfzEZ. XDR-TB cases will receive the following regimen: 6AmLzdPASCsZBdq/14LzdPASCsZBdq.
Drugs will be taken under the direct supervision of health workers, in particular care assistants, throughout the entire treatment period, both at TB TCs and during hospitalization.
To facilitate treatment compliance, each patient will receive psychosocial and nutritional support during their treatment and help to cover the cost of travel between the health care facility that is administering the treatment and the patient's home. It is expected that 1,065 MDR-TB patients and 10 XDR-TB patients will benefit from this support. The cost of the nutrition support will be covered by the National Nutritional Program.

3.2.5 Travel costs for MDR-TB patients will be covered so that their treatment can be initiated and so that they can attend follow-up assessments.

3.2.6 Four two-day training sessions on pharmacovigilance for 30 persons will be run each year for doctors and nurses at TCs and TTCs.

3.2.7 Drugs to treat adverse reactions will be procured regularly.

3.2.8 All MDR-TB and XDR-TB patients (approximately ten patients) who have hearing problems as a result of their treatment will be given hearing aids.

3.2.9 The cost of additional follow-up assessments for patients undergoing treatment will be paid (covered by activity 3.2.3).

3.2.10 The wages will be paid for a liaison worker to manage MDR-TB data and for the six new care assistants who will be recruited to provide treatment.

3.2.11 A meeting of the MDR-TB technical committee will be held every quarter.

3.2.12 Allowances for staff who treat MDR-TB patients at the 17 TCs will be paid.

3.2.13 The costs incurred by the rGLC (regional Green Light Committee) in order to support monitoring of MDR-TB treatment will be covered.

- The TB infection control activities (wearing of masks by patients and respiratory protective equipment by care staff) at the TCs that treat MDR-TB patients will be maintained and strengthened.

Table 6: Amount (in EUR) MDR-TB

	2014 (baseline)	Allocation (EUR)	2016	2017
Number of MDR-TB cases detected	471	Allocation	661,618	1,053,653
		Above-allocation amount	324,129	19,231

MODULE 4: Program management

Two interventions have been selected to address the gaps identified in program management. They are: i) grant management, ii) policy, planning, program management and coordination.

Intervention 4.1: Grant management

4.1.1 The wages of workers recruited for the NTCP grant will be paid.

4.1.2 Bonuses will be paid to state employees of the Central Unit of the NTCP who are involved in grant management.

4.1.3 The wages of the TB grant management team of the community PR will be paid.

4.1.4 The wages of the TB grant management team of the six new sub-recipients and 17 sub-subrecipients will be paid.

4.1.5 The grant management overheads of the NTCP will be paid.

4.1.6 The management overheads of the Central Unit of the community PR will be paid.

4.1.7 The overheads of the six sub-recipients and 17 sub-subrecipients of the community PR will be paid.

4.1.8 The computer equipment for the NTCP grant will be maintained.

4.1.9 Annual external audits of the grant accounts of the NTCP will be carried out.

4.1.10 Computer and office equipment will be procured for grant management for the community PR and the sub-recipients and sub-sub-recipients (at no cost).
For computer equipment, only replacement components and maintenance costs are included in the budget. This is because the computers acquired by the current community PR (CARITAS) will be provided to the new PR.

4.1.11 Computer and office equipment for grant management for the NTCP will be procured.

4.1.12 Premises will be fitted out to accommodate the new staff of the community PR.

4.1.13 Annual external audits of the grant accounts of the community PR will be carried out (cost shared with the HIV grant).

Intervention 4.2: Policy, planning and coordination

4.2.1 Vehicles will be purchased for the Central Unit of the NTCP (1) and TCs (13 = 8 old + 5 new) to coordinate and supervise activities on the front line.

4.2.2 The vehicles and motorcycles of the NTCP will be maintained.

4.2.3 The NTCP will be supplied with fuel for the coordinating and monitoring activities.

4.2.4 Medical equipment will be maintained.

4.2.5 There will be capacity building of the community PR (review and replanning with the support of the Administrative Council and the International Alliance, technical assistance, attending international conferences).

4.2.6 There will be capacity building of the governmental PR (attending international conferences, courses on TB, TB/HIV, MDR-TB, pharmacovigilance, program management, use of data for management purposes, development of an operational plan and the supply chain).
This capacity building will target managers at the central level and also those at the intermediate level.

4.2.7 World Tuberculosis Day will be organized.
A mass information campaign and active TB testing for a specific group (shanty town, villages, etc.) will be organized.

Intervention 4.3: Procurement and supply management

4.3.1 A three-day national workshop will be held in order to determine the quantities of pharmaceutical supplies and laboratory consumables, in cooperation with supply chain actors.

4.3.2 Every quarter, a one-day coordination meeting of the National Pharmaceutical Logistics Committee will be held (cost shared with the malaria program and the NACP).
This committee includes all actors in the supply chain. During these meetings, stock levels will be assessed and the supply plan for the various items will be presented and discussed.

4.3.3 Eight training sessions on drug management through the use of the Information and Logistics Management System (SIGL) will be held.
Pharmacists, managers and logistics officers from the regions, districts and hospitals will be trained during these sessions. Each session will last for three days and will be attended by 25 people. This training will make it possible to improve procedures for the management of stored products and their distribution and use at all levels.

4.3.4 The consumption and use of TB drugs will be assessed at each quarterly meeting held by the NTCP for the TCs and TTCs and during the quarterly meetings normally held in the regions and districts (cost covered by activity 5.2.5).

- Communication between the agency that buys TB drugs - the GDF - and the NTCP will be improved in order to optimize the process of delivering and transporting TB control supplies from suppliers' warehouses to the new Public Health Pharmacy.

4.3.5 The cost of post-marketing quality control for TB drugs to be performed by a laboratory that has been certified or prequalified by WHO will be paid (covered by activity 1.4.3).
The National Public Health Laboratory (NPHL) has not yet obtained WHO prequalification or ISO 17025 certification and is not yet ready to control the quality of TB drugs which enter the country after being delivered by the GDF.

4.3.6 The 22 TCs will be equipped with computers so as to computerize and deploy the SIGL at all levels in order to improve stock management (covered by activity 4.1.11).

A procedure for the management and destruction of expired products will be implemented in accordance with the national guidelines and WHO recommendations (no inherent cost).

Table 7: Amount (in EUR) for the program management module

	2014 (baseline)	Allocation (EUR)	2016	2017
Amount	-	Allocation	1,489,777	1,364,677
		Above-allocation amount	197,241	27,676

MODULE 5: HSS − Monitoring and evaluation

Monitoring and evaluation are important in the management of any TB control program. M&E data facilitate efficient and rational use of resources and monitoring of the epidemiological situation. To strengthen the M&E system, the following actions will be undertaken:

Intervention 5.1: Communication of information

5.1.1 Reproduce the tools for the management of TB, including MDR-TB and TB/HIV (TB registers, laboratory, MDR-TB, pharmacy, nutrition, treatment forms, IPT register, reporting forms, supervision form, contact subject survey forms, annual activity report).
5.1.2 Reproduce the M&E tools for the community strategy.
5.1.3 Develop a computer application to manage TB laboratory data (microscopy, quality control, cultures, molecular and drug sensitivity tests, equipment, consumables) (covered by PEPFAR funding).
5.1.4 Organize a three-day training session for 20 health care professionals at TCs and the Central Unit of the program on the TB laboratory data management application (covered by PEPFAR).
5.1.5 Organize two five-day training sessions on the DHIS 2 software program for 20 health care professionals from TCs and the NTCP.
5.1.6 Develop a computer application to manage MDR-TB data (funded by PEPFAR).
5.1.7 Organize a three-day training session for five NTCP managers on the use of the computer application to manage MDR-TB data (funded by PEPFAR).
5.1.8 Procure archiving kits (cabinets, archive files for reports, external hard disks) for the TCs and TTCs.

Intervention 5.2: Analysis, review and transparency

5.2.1 Regularly supervise the TCs/TTCs (the central level will supervise TCs, and TCs will supervise TTCs). The TTCs will routinely supervise the 480 primary health care facilities where TB care and control activities will be integrated.
5.2.2 Contribute to the organization of the annual workshop organized by DPPEIS on validation of national data.
5.2.3 Audit the quality of data reported by community actors.
5.2.4 Train the managers of the TCs to analyze data in the information system, develop operational plans and monitor and evaluate annual operational plans.
5.2.5 Hold meetings to review TB control activities at the national and regional levels.
5.2.6 Hold annual five-day meetings of the Central Unit for annual analysis and coordination of the NTCP.
5.2.7 Conduct the midterm review of the NSP in 2017.
5.2.8 Ensure that community actors attend the training on DHIS 2 (no cost).
5.2.9 Hold quarterly meetings to coordinate the monitoring of the project by the community PR with the sub-recipients (costs shared with the HIV grant, community PR).
5.2.10 Make quarterly visits so that the community PR can oversee the financial data of the sub-recipients (finance team).
5.2.11 Make quarterly visits so that sub-recipient and sub-subrecipient data can be validated by the community PR (M&E and program team).
5.2.12 Make monthly joint visits so that the sub-subrecipients can be supervised and coached by the sub-recipient of the community PR (Finance/Grants, program and M&E team).

5.2.13 Hold quarterly review/coordination meetings between the health care worker teams and the NGOs at each TC.
5.2.14 Organize the evaluation of the community component in 2017 with the support of a consultant from the Stop TB Partnership (no cost).
5.2.15 Complete the national survey on TB drug resistance which is currently under way.
5.2.16 Conduct a study of the causes of death of patients under TB treatment.
5.2.17 Conduct a study focusing on gender equality in terms of access to TB care services in Côte d'Ivoire.
5.2.18 Organize a trip to launch the community TB project with the district chief doctors and the doctors, nurses and laboratory technicians of the 17 TCs.

Intervention 5.3: Leadership – Management – Governance (LMG)

A pilot HSS scheme has been implemented with technical support from Management Sciences for Health (MSH) and financial support from PEPFAR through the LMG project in the health regions of N'zi-Iffou-Moronou and Indenié-Djuablin.
The new LMG practices adopted by managers in these districts and regions thanks to the Leadership Development Program (LDP+) has led to an improvement in certain health indicators. To this end, the following action will be undertaken:

5.3.1 Contribute to HSS through the TB grant (LDP+).

Table 8: Amount (in EUR) for the monitoring and evaluation module

	2014 (baseline)	Allocation (EUR)	2016	2017
Amount	-	Allocation	725,352	478,733
		Above-allocation amount	147,945	-

Activities included in the allocation amount and the above-allocation amount
The essential requirements for the key interventions that are budgeted under the allocation amount are:

- First-line and second-line drugs including the costs of supply, storage, quality control and distribution to treat 52,367 cases of sensitive TB, 1,065 MDR-TB cases, 10 XDR-TB cases and to provide isoniazid prophylaxis to 16,169 child contacts of contagious TB cases who do not have TB,
- Supplies for diagnosis and patient monitoring (microscopy kits, cultures and sensitivity tests, GeneXpert kits and calibration kits),
- Human Resources (wages for staff who manage the grant, allowances for staff involved in program management and patient treatment),
- Covering the costs of managing MDR-TB patients (pre-treatment and monitoring assessments, dealing with hearing difficulties, cost of travel for DOT and for follow-up examinations, capacity building of treatment actors),
- Expanding TB service coverage (creation of 62 new TTCs including renovation, staff training and provision of equipment and diagnostic supplies, involvement of 480 peripheral health care facilities in the referral of suspected TB cases),
- TB/HIV activities virtually 100 percent covered by PEPFAR for HIV testing in all of the 52,367 sensitive TB cases to be screened during the period, ART for 11,143 TB/HIV patients (90 percent of TB/HIV cases) and TB screening for 656,000 PLHIV,
- Supervising the activities of the TCs, TTCs, the 480 peripheral facilities and the CHWs,
- Supervising and providing quality control of laboratories within the microscopy network,
- All community activities identified to support TB control during the period.

Aside from these top-priority activities which are covered by the allocation amount, there are other important activities which are budgeted in addition to the allocation amount for which no funding is currently available:

1.1.14 Train four health care professionals, including two employed at the NRL/CeDReS and two employed in TC laboratories, in the international course on mycobacteriology applied to NTCPs (Benin).
3.2.14 The specialist center in Adzopé will be renovated and equipped to treat MDR-TB and XDR-TB.
3.2.15 The costs incurred by the rGLC in order to support monitoring of MDR-TB treatment will be covered.
4.2.1 Vehicles will be purchased for the Central Unit of the NTCP (1) and TCs (13 = 8 old + 5 new) to coordinate and supervise activities on the front line.
4.2.6 There will be capacity building of the governmental PR (attending international conferences, courses on TB, TB/HIV, MDR-TB, pharmacovigilance, program management, use of data for management purposes, development of an operational plan and the supply chain).
This capacity building will target both managers at the central level and also those at the intermediate level.
5.1.8 Procure archiving kits (cabinets, archive boxes for reports and external hard disks) for the TCs and TTCs.
5.2.15 Complete the national survey on TB drug resistance which is currently under way.
5.2.16 Conduct a study of the causes of death of patients under TB treatment.
5.2.17 Conduct a study focusing on gender equality in terms of access to TB care services in Côte d'Ivoire.

3.3 Modular Template

Complete the modular template (Table 3). To accompany the modular template, for both the allocation amount and the request above this amount, briefly:

a. Explain the rationale for the selection and prioritization of modules and interventions;
b. Describe the expected impact and outcomes, referring to evidence of effectiveness of the interventions being proposed. Highlight the additional gains expected from the funding requested above the allocation amount.

[For the references, please see section 1, sub-section 1.1, paragraph 1.1.a:Epidemiology]

Reminder of Key Points

- In view of the key points summarized in section 3.2 of this concept note, the interventions proposed for funding are aimed, as a matter of priority, at facilitating access for the segment of the general population that currently has little or no access to TB services, PLHIV, and patients affected by MDR-TB. However, at-risk groups such as contacts of patients and underground miners and vulnerable populations such as children and prisoners are by no means neglected in this concept note. This is because the interventions aimed at these groups are currently inadequate and need to be strengthened. In addition, this concept note includes activities which are intended to improve management capacities within the NTCP network in order to properly implement these interventions and the associated activities.
- Therefore, the implementation of the activities proposed for funding will make it possible to increase the identification of TB cases and to cure a large proportion of these groups, which will lead to a reduction in the number of deaths related to this disease. As a result, they will likely contribute to a reduction in TB mortality among the population as a whole, which is the goal of the 2016-2020 NSP.

Module 1: Treatment and prevention

Rationale for module

- Despite the efforts made to combat TB in Côte d'Ivoire, no downward trend may be observed in the spread of the disease.
- A large proportion of the population, especially in urban and suburban areas, seems to have difficulty accessing TB care and control, particularly TB diagnosis services.
- A large proportion of the population (52 percent) seeks services in the private health sector, which is not currently fully involved in TB control efforts.
- Apart from PLHIV, the NTCP has yet to develop specific interventions targeting certain groups at high risk of contracting TB, such as contacts of patients or diabetics, or vulnerable populations such as women and children among whom HIV prevalence is higher than among men.
- Although the treatment success rate has increased over recent years, it is still below the required rate of 85 percent.

Rationale for activities

- Increasing capacities to provide TB care and control services, especially diagnostic services, by giving priority to populations who have the greatest difficulty in accessing care, including those who are most affected by HIV.
- Strengthening the integration of TB care and control services within the network of primary health care facilities.
- Improving the identification and treatment of patients suspected of having TB.
- Implementing approaches to involve health care practitioners outside the Ministry of Health network, particularly the private health sector.
- Developing specific interventions targeted at groups at high risk of contracting TB and vulnerable populations.
- Providing treatment and appropriate care for all patients diagnosed with TB.

Impact

- Since it is expected that the implementation of this module will increase the number of notified TB cases and that a significant proportion of them will be treated successfully, it is likely that TB mortality among the general population will improve as a result.

Outcomes

- By 2017, the number of notified TB cases will reach around 26,179 and the treatment success rate will be at least 86 percent.

Result

- The proportion of PTB+ cases among patients suspected of having TB will fall from 17 percent in 2014 to 5 percent in 2017.

Module 2: TB/HIV

Rationale for module

- The HIV/AIDS epidemic is widespread in Côte d'Ivoire. PLHIV are a high-risk group for TB, not only because of their immunodeficiency but also because of their social vulnerability.
- Joint TB/HIV co-infection control activities recommended by WHO are being implemented through the NTCP and the NACP (and co-financed by the Global Fund and PEPFAR). However, integration of the services provided by these two programs is not being implemented fully at health care facilities. Although 90 percent of registered TB patients are tested for HIV, only half of TB/HIV co-infected patients are treated with ARVs. Only 50 percent of PLHIV underwent routine testing for TB in 2014.
- The implementation of this module will help to increase detection of both TB among PLHIV and HIV among TB sufferers. The early identification of TB/HIV co-infected patients will also help them to be provided with early treatment. This is likely to reduce the number of deaths among patients. Moreover, the integration of health care services will improve their quality and accessibility for co-infected patients, who will have a better quality of life.

Rationale for activities

- Revitalize partnership mechanisms at all levels of the health system.
- Strengthen HIV screening among registered TB patients by 2017.
- Provide ART to 90 percent of co-infected TB patients in 2017.
- Provide adequate treatment and monitoring for PLHIV who are diagnosed with TB.

Outcome

- The death rate among patients treated for TB/HIV co-infection will fall.

Results

1. By 2017, all notified TB patients will be tested for HIV.
2. By 2017, 90 percent of TB/HIV co-infected patients will be treated with ARVs.

3. By 2017, 90 percent of PLHIV who receive care will be routinely screened for TB.

Module 3: MDR-TB

Rationale for module

- NTCP facilities have witnessed the emergence of MDR-TB among detected cases of TB: in 2014, 271 patients were diagnosed with MDR-TB.
- There has been significant capacity building at the country level to care for patients who have MDR-TB, thanks to support from the Global Fund and the Union. To build on what has been achieved, these efforts must be consolidated, developed and strengthened.
- With wider use of GeneXpert tests, there will be more patients with MDR-TB who will seek treatment from health care facilities.

Rationale for activities

- Care service capacity building for patients who have MDR-TB. As mentioned, treatment will be provided on an outpatient basis for the majority of patients at TCs.

Outcomes

- The treatment success rate for MDR-TB patients who are treated with second-line drugs will reach 80 percent by 2017.

Results

1. By 2015, 82 percent of the estimated number of MDR-TB cases will be identified.
2. In 2017, 100 percent of identified MDR-TB cases will be treated with second-line TB drugs.

Module 4: Program management

Rationale for module

Rationale for activities

The rationale for this module is to ensure that the governmental PR (the NTCP) and the community PR (Alliance-CI) have sufficient resources to manage the Program effectively (availability of human resources, means of transport, equipment, operating costs, facilitation of supervisions and capacity building); b) have the capacity to manage the Global Fund resources effectively and efficiently.

Outcomes

- **Financial management of the program**: Requests for disbursement and associated supporting documentation are made on time/available, and financial audits give a final discharge to the two PRs.
- **Technical management of the program**: Key Program data are available and accessible and the activities of the PRs are implemented according to plan.
- **Administrative management of the program**: The activities of the sub-recipients and sub-sub-recipients – if applicable – and the entering-into and monitoring of the contracts are in accordance with normal standards.
- **Management of drugs and supplies**: Quantification is performed on time and orders are placed within a reasonable time and based on a functional information system.

Results

The PRs operate transparently on the basis of the established procedures and have all information that could be requested by the Ministry of Health and AIDS Control, or technical and financial partners (TFPs) including the Global Fund.

Module 5: Monitoring and evaluation

Rationale for module

- Monitoring and evaluation is an essential part of the management of any health program. The production and use of high-quality data are essential for sound management of available resources.

- In view of the scale and severity of the TB epidemic, the way in which TB/HIV co-infection is spreading and the amount of resources mobilized for TB control, an effective M&E system must be implemented.
- The data included in reports on laboratory and pharmacy activities are generally of insufficient quality, and data concerning TB control activities undertaken through the community network cannot be collected by either the NTCP information system or the NHIS.
- Data are not always analyzed at the district level and the information cycle for the collection of data on patients tested by GeneXpert and MDR-TB patients who are treated and followed up is not clearly established. The M&E system of the NTCP is not yet fully connected to the NHIS, contrary to the policy established by the Ministry of Health.

Rationale for activities

- The activities under this module will improve the M&E system through: i) the printing of registers and forms which are tailored to the new WHO information system (2013), ii) training on the new information system, iii) the development of a computer-based data collection program, iv) the development of data analysis capacities at central and regional units, v) strengthening of the information system to monitor MDR-TB patients, vi) collection and analysis of data on activities undertaken within the national network of TB laboratories, including in relation to molecular tests, and vii) the development of operational research.

Outcome

- In time, a consistent planning framework and appropriate evaluation of activities will be implemented thanks to the improvement of the M&E system.

Result

- An operational, efficient information system at all levels of the NTCP with the capacity to generate and analyze data on all TB control interventions and activities undertaken in Côte d'Ivoire.

3.4 Focus on Key Populations and/or Highest-impact Interventions

This question is not applicable for low-income countries.

Describe whether the focus of the funding request meets the Global Fund's Eligibility and Counterpart Financing Policy requirements as listed below:

a. If the applicant is a lower-middle-income country, describe how the funding request focuses at least 50 percent of the budget on underserved and key populations and/or highest-impact interventions.
b. If the applicant is an upper-middle-income country, describe how the funding request focuses 100 percent of the budget on underserved and key populations and/or highest-impact interventions.

As a lower-middle-income country, Côte d'Ivoire is concerned by question "a".

This concept note clearly prioritizes populations who have difficulty accessing TB diagnosis and treatment services and who are the first key population to be considered. This is backed up by data from the NTCP's information system. This concept note also targets high-risk groups such as PLHIV, contacts of patients, underground minors and diabetics, as well as vulnerable populations such as children, women and prisoners.

This concept note also targets MDR-TB sufferers whose vulnerability is by no means negligible due to their health and social status.

In reality, virtually two thirds (65 percent) of the budget for this concept note will target key, high-risk and vulnerable populations.

It includes high-impact interventions.

SECTION 4: IMPLEMENTATION ARRANGEMENTS AND RISK ASSESSMENT

4.1 Overview of Implementation Arrangements

Provide an overview of the proposed implementation arrangements for the funding request. In the response, describe:

a. If applicable, the reason why the proposed implementation arrangement does not reflect a dual-track financing arrangement (i.e. both government and non-government sector Principal Recipient(s).
b. If more than one Principal Recipient is nominated, how coordination will occur between Principal Recipients.

c. The type of sub-recipient management arrangements likely to be put into place and whether sub-recipients have been identified.
d. How coordination will occur between each nominated Principal Recipient and its respective sub-recipients.
e. How representatives of women's organizations, people living with the three diseases, and other key populations will actively participate in the implementation of this funding request.

a. The implementation arrangement proposed by the parties who took part in the national dialogue is dual-track financing with one governmental or public PR and one civil society or community PR.

b. This concept note makes provision for a framework for quarterly consultation between the NTCP (the public PR) and Alliance Côte d'Ivoire (the community PR). This framework will make it possible to coordinate the interventions and monitor the program.

The community interventions will be structured around health care facilities which provide TB care (TCs, TTCs, peripheral health care facilities which refer suspected TB cases, centers which treat PLHIV) on the basis of an intervention map to be drawn up by agreement.

c. In previous programs, the NTCP had no sub-recipients. However, its pyramid-style organization with the regional TB TCs means that it can coordinate and monitor activities at all levels.

Coordination between the community PR and the sub-recipients will be achieved through capacity building, supervision, monitoring and quarterly coordination meetings. The PRs must also draw up and sign contracts with the sub-recipients in which the obligations of the parties are specified.

d. If necessary, the community PR may strengthen the sub-recipients on the basis of a strengthening plan to be drawn up after sub-recipient capacities have been assessed. This strengthening plan will be implemented during the first half of the first year by including technical assistance from Expertise France/the 5 percent initiative or the Grant Management System (GMS).

The plan for the implementation of the community component is set out in Annex 6 to the concept note. Six sub-recipients, of which four are sub-recipients under the HIV grant, have been identified by the community PR in order to: i) capitalize on the experience of Alliance Côte d'Ivoire in the field of HIV/AIDS, ii) facilitate the integration of TB activities within the HIV NGOs, iii) extend the interventions to all districts, and iv) improve the efficiency of the strategy.

d. The community sub-recipient coordination mechanism established by Alliance Côte d'Ivoire for the HIV grant will be replicated for the community activities included in this concept note.
In addition, the community PR plans to rely on the existing coordinating body (COLTMR) as sub-recipient to improve the coordination of the community interventions under the grant and even at the national level with the other bodies funded by other donors. As a result, the organizational, technical and material capacities of COLTMR will be strengthened so that it can provide leadership (advocacy, community mobilization and monitoring committee) in TB control at the community level.

The CCM will play its role as overseer in coordinating and strategically monitoring grants through general meetings, the quarterly review of the PR dashboard, supervising PRs by providing support where there are difficulties and making recommendations in management letters, making sub-recipient site visits and reviewing progress update and disbursement requests (PUDRs) with the local fund agent (LFA).

The PRs will enter into contracts with the sub-recipients selected by the CCM. They will disburse funds to the sub-recipients in order to implement measures and will coordinate and monitor implementation in accordance with the memorandum of understanding that will be drawn up between the PRs and the sub-recipients, and will also hold quarterly coordination meetings.

A framework for cooperation between the NTCP and the MSH will be signed. The funds required for implementation will be made available to the MSH, which will be responsible for financial management and funding accountability. The MSH will be accountable to the DGS and the NTCP as the NTCP is responsible for the public component of the Global Fund grant.

The sub-recipients will be responsible for implementation and will be accountable to the PRs.

e. RIP+, as the Ivorian network of PLHIV organizations, will be actively involved in the implementation of the community TB interventions.

The involvement of TB patients and former TB patients will be strengthened, particularly within the COLTMR network. In addition, the representatives of people who are infected, affected or concerned by three diseases (HIV, TB and malaria) and the key populations are members of the CCM and are participating fully in governance and oversight of the implementation of the interventions. The program will ensure that women are effectively represented during social mobilization.

The procedures manual for sub-recipients of the community PR will include a section on participatory planning and implementation of activities. The requests and reports of the sub-recipients will clearly show how beneficiaries have been involved in the implementation of activities.

The program will pay particular attention to the difficulties experienced by women in accessing prevention and treatment, including improvement of access to TB prevention and treatment for women, children and other key populations who are vulnerable, such as PLHIV and prisoners, who are important aspects of this funding request.

4.2 Ensuring Implementation Efficiencies

Complete this question only if the Country Coordinating Mechanism (CCM) is overseeing other Global Fund grants.

Describe how the funding requested links to existing Global Fund grants or other funding requests being submitted by the CCM.
In particular, from a program management perspective, explain how this request complements (and does not duplicate) any human resources, training, monitoring and evaluation, and supervision activities.

Côte d'Ivoire has committed itself to controlling malaria, TB and HIV through the respective national programs. Since 2002, Côte d'Ivoire has received nine Global Fund grants to control these three diseases. On the whole, all of these grants have improved the health of those affected by the three diseases and to strengthen the health system in Côte d'Ivoire.

Before the arrival of the Global Fund, funding for TB control was provided mainly by the state with support from the National Tuberculosis Control Committee of Côte d'Ivoire (CNACI) through the procurement of drugs, the opening of centers and the payment of wages for certain health workers.

At the start of the Global Fund grant in 2003, in addition to the interventions that were previously supported by CNACI, interventions were scaled up with increased decentralization and an increase in the number of treatment centers (60 in 2002 and 160 in 2015). Support from the Global Fund may also be observed in HSS, training and supervision.

Phase 2 of the Round 9 HIV grant is currently supporting a number of HSS areas such as the NHIS, the supply chain and support for the running of health regions. All these interventions are benefiting the three diseases and more besides.

The community component of this concept note will supplement the arrangements that have already been implemented through the HIV grant. A total of 186 community counselors who are already in post as a result of the HIV grant (person responsible for care and support and PMTCT support) will be involved in TB control. Through this concept note, 201 new counselors will be recruited to support TB patients and contribute to efforts to screen TB patients for HIV. Both types of counselors will contribute to an increase in case notification.

The malaria grant that is currently being negotiated will support community systems strengthening, performance-based funding and LMG in two health regions through the LDP+ program.

To boost the HSS proposed in the malaria grant, this request will support the same areas as the malaria grant but in different geographical areas, with the exception of performance-based funding. In addition, in view of the scale-up of treatment for TB, HIV and malaria, an important part of quality assurance - safety monitoring for clients, pharmacovigilance - will be supported by this grant as an important component of treatment for TB patients. Pharmacovigilance has been adopted in Côte d'Ivoire but is not fully operational due to limitations in terms of human resources, material resources and organization.

Furthermore, this funding request for TB control is necessary to take over from the current grant, which

ends in June 2015, and will make it possible to continue to control this disease.

4.3 Minimum Standards for Principal Recipients and Program Delivery			
Complete this table for each nominated Principal Recipient. For more information on minimum standards, please refer to the concept note instructions.			
PR 1 Name	NTCP	**Sector**	**PUBLIC**
Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?		X Yes ☐ No	
Minimum Standards		**CCM assessment**	
1. The Principal Recipient demonstrates effective management structures and planning.		The management of the NTCP comprises two components: program management and financial management. Program management is performed by eight technical departments managed by senior health officers (doctors and pharmacists). Financial management is performed by a team recruited and paid by the Global Fund which is made up of funding manager, a senior accountant, an accountant, an internal auditor and an assistant. The NTCP is managed by a Coordinating Manager who is assisted by a deputy.	
2. The PR has the capacities and systems necessary for effective management and oversight of sub-recipients (and sub-sub-recipients).		In previous projects, the NTCP had no sub-recipients. However, its pyramid-style organization with regional TB TCs enables it to coordinate and monitor activities at all levels.	
3. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud.		The NTCP has an administrative and financial procedures manual which is approved by the Global Fund. The financial unit is supervised by the Fiduciary Agency put in place by Global Fund.	
4. The financial management system of the Principal Recipient is effective and accurate.		The NTCP's financial management system comprises the financial team (Financial Supervisor, a senior accountant, an accountant, an internal auditor and the Fiduciary Agency). Management software which is suitable for multi-donor reporting (TOMPRO) is used for management purposes, and staff have been trained to use it and are familiar with it. The NTCP has a bank account with Standard Chartered Bank into which payments from the Global Fund are transferred. The NTCP reports on the financial situation regularly and quarterly through PUDR.	
5. Central warehousing and regional warehouse have capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products.		TB drugs are delivered and stored at the new PSP-CI which has sufficient space to store TB products. However, current rainfall conditions present some problems which are being resolved by repair works that are currently under way. At the regional level, drugs are stored at general or district hospitals. The TCs that have pharmaceutical warehouses store drugs in their own warehouses. Some of these warehouses do not have enough space to meet storage needs. It is therefore important to adapt these warehouses so that products can be stored properly and/or to identify new premises that can be used for this purpose.	

6. The distribution systems and transportation arrangements are efficient to ensure continued and secured supply of health products to end users to avoid treatment/program disruptions.	The transport system for drugs and medical products is provided by the new PSP-CI, which has adequate logistics to carry out this task. To guarantee the regularity and good quality of products at the time of delivery, the NTCP and the NMCP have procured four trucks through the Global Fund (two 10-ton and two 15-ton trucks) for the new PSP- CI.
7. Data collection capacity and tools are in place to monitor program performance.	Data are collected using standardized management tools (WHO model) that incorporate the new definitions. They are reproduced and distributed regularly to all TB TCs and TTCs. Every quarter, data collected at the sites are compiled and sent to the regions and then the coordinating body of the NTCP. A new data management software solution (DHIS 2) is currently being deployed. Key TB control data are integrated into it. However, this tool has not yet been deployed at the peripheral level.
8. A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately	Program data which are collected by treatment facilities are reported quarterly. Annual assessments are organized both at the central level by the management of the NTCP and at the regional level by TB TCs and their coordination areas. World Tuberculosis Day is also an opportunity to distribute results to the general population.
9. Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain.	Product quality control is performed by the NPHL, which will conduct the tests for which it has proven expertise. Other tests will be sent to another external laboratory designated by agreement of all stakeholders. In view of the importance of this activity, a four- party partnership framework comprising the NTCP, the new PSP-CI, the NPHL and the DPML is currently being signed off.

PR 2 Name	ALLIANCE CÔTE D'IVOIRE	**Sector**	**COMMUNITY**
Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?		X Yes ☐No	
Minimum Standards		**CCM assessment**	
10. The Principal Recipient demonstrates effective management structures and planning.		National Alliance Against AIDS in Côte d'Ivoire (Alliance Nationale contre le SIDA en Côte d'Ivoire − ANS-CI) comprises the following components: a general assembly, an administrative council and an executive board (director, coordinator, internal auditor, M&E, grant management, finance officer and a procurement, supply and logistics specialist) which are experienced in leading HIV/TB programs. It receives technical support from the International HIV AIDS Alliance (IHAA).	
11. The Principal Recipient has the capacities and systems necessary for effective management and oversight of sub-recipients (and sub-sub-recipients).		For the Round 9 HIV grant, ANS-CI as the community PR monitors activities and provides technical assistance to seven sub-recipients and 40 sub-sub-recipients on the basis of management manuals validated by the Global Fund. To this end, ANS-CI builds the capacities of implementation actors in relation to financial management, logistics, M&E, program management and	

	organizational development (monitoring implementation of the capacity building plan). The M&E system is based on the MRS and the PR dashboard. It comprises an internal sub-system (PR) and an external sub-system (sub-recipients, sub-sub-recipients).
12. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud.	ANS-CI uses procedures manuals that clarify the separation of incompatible tasks and several levels of operational controls in order to reduce the risk of fraud as much as possible. The organization also has an internal auditor whose roles and functions provide better assurance that operations are under control. ANS-CI also has an anti-fraud policy that is followed by all staff. ANS-CI's risk management plan makes it possible to prevent and anticipate risks of fraud and abuse. Similarly, ANS-CI has trained its sub-recipients in risk management and has helped them to prepare risk management plans.
13. The financial management system of the Principal Recipient is effective and accurate.	ANS-CI's accounting system uses a software solution that is suitable for multi-donor reporting (TOMPRO). The system that is in place assures transparency and reliability in financial operations and ensures that they comply with the regulations and restrictions applicable to funding donors. It also facilitates budget monitoring, per partner, per budget line, per category of expenditure and per service area. Financial information is backed up automatically on various media inside and outside the organization.

14. Central warehousing and regional warehouse have capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products.	For the Global Fund Round 9 grant for HIV/AIDS control, ANS-CI uses AIMAS (Ivorian Social Marketing Agency) warehouses to store medical supplies. These warehouses ensure adequate condition, integrity and security of health products (condoms and lubricant). ANS-CI has a warehouse of its own which complies with security standards.
15. The distribution systems and transportation arrangements are efficient to ensure continued and secured supply of health products to end users to avoid treatment/program disruptions.	ANS-CI supplies its implementation partners continuously and securely. To this end, a distribution plan has been drawn up and transportation service providers are selected through a transparent process. ANS-CI has an experienced specialist in procurement management, storage and the logistics chain who pre-empts and reduces stock-out risks. Standardized tools have been developed to manage logistics at all levels.
16. Data-collection capacity and tools are in place to monitor program performance	ANS-CI's M&E system, which is based on the MRS and the PR Dashboard, guarantees a data integrity process, maximizing the reliability and validity of program implementation outcomes. The internal sub-system that is geared to monitoring PR activities is based on: i) the development and monthly updating of a dashboard that measures progress made with activities; ii) collection and centralization of data on activity implementation in the MRS database; iii) review and half-yearly planning of activities with the technical support of the International HIV/AIDS Alliance; iv) preparation of regular reports on the organization's activities. The external sub-system dedicated to monitoring activities carried out by the implementation partners

	includes i) M&E capacity building for actors; ii) activity monitoring visits including meetings with beneficiaries of projects conducted by the implementation partners for closer technical support; iii) preparation and monthly updating of a PR dashboard measuring the performance of the various sub-recipients; iv) quarterly meetings to analyze activities with partners for each intervention area; v) collection and centralization of programmatic activity reports of MRS partners; vi) quality control of data and evaluation of completed programs; vii) identifying and documenting case studies. Interaction between the two sub-systems contributes to the collection of high-quality data for M&E of activities.
17. A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately	The indicators used by ANS-CI are aligned with national and international indicators, facilitating their incorporation into national reports and use. Data are communicated monthly (from the sub-sub-recipient to the sub-recipient) and quarterly (from the sub-recipient to the PR). This system is supported by the national information system, which ensures that collected data are shared with the health districts, the national control programs, the DPPEIS, donors and society. A data quality assurance system has been put in place by ANS-CI, including a review and analysis of data at all collection levels (sub-sub-recipients, sub-recipients, PRs), quarterly sessions for joint validation of data during coordination meetings, and half-yearly data quality audit engagements (RDQA). Regular capacity building sessions for the M&E teams are held at all levels to guarantee the quality of the data and information generated. ANS-CI also plays an active role in the process of reviewing and incorporating indicators into DHIS 2.
18. Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain.	Quality control for products imported by ANS-CI is performed by internationally certified laboratories before they are accepted at Abidjan Airport. At the local level, ANS-CI will rely on the NPHL, which is currently benefiting from capacity building thanks to Global Fund funding.

4.4 Current or Anticipated Risks to Program Delivery and Principal Recipient(s) Performance

a. With reference to the portfolio analysis, describe any major risks in the country and implementation environment that might negatively affect the performance of the proposed interventions including external risks, Principal Recipient and key implementers' capacity, and past and current performance issues.
b. Describe the proposed risk-mitigation measures (including technical assistance) included in the funding request.

Details of the grant risk analysis carried out by the CCM with support from GIZ (*Gesellschaft für Internationale Zusammenarbeit*) are available in an appendix (Annex 7).

Risk of socio-political upheaval that may hinder or prevent the normal implementation of grants

The socio-political crisis of 2010 and the current and future socio-political climate in Côte d'Ivoire require special attention. The next presidential and legislative elections scheduled to take place in the second half of 2015 will be crucial for continuing peace and social cohesion. Any political unrest could jeopardize the proper implementation of this grant with risks for the management of property and equipment. However, there is political will for continuing dialogue with all stakeholders in the

national reconciliation process establishing the National Development Plan (PND) [35] through the following actions:

- Political dialogue between the authorities and opposition parties;
- The CDVR (Commission for Dialogue, Truth and Reconciliation) has finished listing and listening to victims and witnesses of the 2010 socio-political crisis;
- The national social cohesion program led by the Ministry of Planning and Development;
- The solidarity and social cohesion monitoring center run by the Ministry of Solidarity, Women, the Family and Children.

Before any risk arises, all parties receiving funds should take out a comprehensive building and contents insurance policy and identify a location where property can be kept safely.
Should a risk arise, the CCM will order that activities be stopped and that funds and resources belonging to the CCM, PRs, sub-recipients and sub-sub-recipients be secured through the following actions:

- Freezing bank accounts
- Drawing up financial statements regarding the funds of the CCM, PRs, sub-recipients and sub-sub-recipients
- Making these statements available to the CCM and the Global Fund
- Gathering all resources together in the previously identified secure location.

Risk of natural disasters

Natural disasters such as floods with displacement of populations could lead to an increase in TB mortality due to overcrowding and drug stock-outs due to a lack of access to districts**.** To mitigate this, the PRs should pre-position supplies in regions prior to the rainy season, and coordinate their actions with the ORSEC (Rescue Organization) plan of the National Office for Civil Protection in order to include TB control supplies in this plan.

Risk of a shortage of human resources to implement activities

In Côte d'Ivoire, the quality of human resources does not pose any problems. The MSLS has resources that are sufficiently qualified to manage and monitor the resources to be allocated to implement this grant. However, there is an inadequate number of qualified staff due to the movement of staff from treatment centers. Some centers do not have pharmacy managers.
This risk factor will be taken into account by the new reforms of the health sector which aim to establish a mechanism for non-financial incentivization and improvement of working conditions in order to give health care workers more stability.

Risk of expected performance being compromised or failure to achieve contractual grant targets

Need for capacity building in the NTCP's managerial achievements

Operational planning: Most often, TB TCs do not develop annual operational plans in order to pursue their activities which they should submit to the Central Unit. Consequently, the latter draws up its annual plan without taking the needs of health regions into account. In addition, TB control activities are often omitted from the annual plans developed by District and Regional Health Managers. These gaps are having an impact on i) the implementation and monitoring and implementation of TB control activities at all levels, ii) the coordination of other ministerial departments, and iii) budget execution. The corrective measures planned in this concept note are as follows:

- Train managers of TB TCs to analyze data in the information system, draw up operational plans and monitor and evaluate annual operational plans.
- Ensure that these plans are made available to the coordinating body of the program within the required time-limits so that they can be taken into account when the national plan is drawn up.
- Involve the District and Regional Managers in regional TB control planning and analysis meetings (activity 5.2.5).

Budget execution: In the grant that is currently being implemented, there have been repeated delays in i) the procurement of non-medical equipment; ii) renovation activities; and iii) expenditure on

[35] National Development Plan 2012-2015

certain forms of support planned for MDR-TB patients. These obstacles have resulted in a low level of absorption of the grant budget.

- Procurement (equipment): The delays experienced in the current TB grant are mainly due to a disagreement between the Department of Procurement and the Global Fund with regard to procurement procedures.
  To remedy this situation, the Global Fund has created standard tender documents which have been approved by the Department of Procurement. This measure has made procurement easier for the governmental PR.
- Renovation activities: The assessments of the sites to be renovated which have been carried out by the DIEM have not been accepted by the Global Fund (the estimate of repair costs was considered to be too high). The LFA has therefore been commissioned by the Global Fund to carry out another assessment. This rejection of the DIEM's work is not conducive to its involvement in the monitoring of the works.
  To remedy this, the NTCP and the DIEM plan to draw up architectural plans for the renovation of health care facilities (activity 2.2.3). This activity is being financially supported by PEPFAR.
- Support for MDR-TB patients: There has been a delay due to difficulties in the management of these resources. The travel costs of MDR-TB patients began to be paid in February 2014. However, the funds for nutritional support have not been used due to difficulties concerning the traceability of supporting evidence. To remedy this, it is planned that the nutritional support activities will be funded by the National Nutrition Program.
- Drug management: see below

Drug management risks

The following problems have been identified: i) delays in the procurement by the national authorities, partners and the GDF of certain drugs; ii) quality control (post-marketing surveillance) is not being carried out; iii) problems with drug management at TCs; iv) non-involvement of districts in drug management; v) the illegal pharmaceutical market.

i. Delay in procurement of drugs: This may be due to a shortage at the international level, delivery times not being adhered to by suppliers, or unsuccessful calls for tenders issued by partners. For the current grant, the GDF is supplying all TB drugs (first-line and second-line). Customs clearance procedures have caused a problem for the NTCP due to the failure by the forwarding agent and INCOTERM to send exemption documents on time.
   Under this concept note, it is planned that the GDF will deliver drugs to the NPSP (New Public Health Pharmacy), with which the NTCP has signed a framework agreement (Annex 8). The associated costs are included in the budget (activity 1.4.2).

ii. Quality control: In accordance with Global Fund policy, the GDF will perform quality control of drugs before they are delivered (this arrangement will be kept in place under the concept note). Post-marketing surveillance of drugs is not being carried out currently due to the inability of the NPHL to undertake this activity in its entirety.
   To remedy this, the NTCP has reached agreement with the NPHL that tests which can be carried out will be entrusted to the NPHL and a supranational laboratory will be selected to carry out tests which cannot yet be carried out at the NPHL. The associated costs are included in the budget (activity 1.4.3).

iii. Drug management at TCs: a) Storage conditions are not optimal at some TCs; b) the number of trained stock managers at TCs is insufficient; c) TCs which have sizeable cohorts of patients under TB treatment and ART lack computer resources to manage drugs (they are currently being managed manually using forms).
   a. Storage conditions: Given the lack of funding to renovate TC pharmacies, the NTCP recommends that drugs be stored in district pharmacies. This recommendation has been communicated to TCs which are experiencing storage problems.
   b. Availability of qualified staff: The number of trained stock managers at TCs is insufficient. The NTCP has contacted the Human Resources Department in order to assign staff who are skilled in drug management. This request has made it possible to increase the assignment of pharmacists/ pharmacy managers to some TCs. Dialogue between the HR Department and the NTCP is ongoing.

c. Data management: It is planned that TC pharmacies will be equipped with IT kits for daily management of treatment dispensing (activity 4.1.11). In addition, the NTCP has planned several activities to strengthen the use of the SIGL at all levels:
   - Develop the procurement and supply management (PSM) component in the NTCP's current Procedures Manual.
   - Organize eight training sessions for the pharmacists, managers and logistics officers of regions, districts and hospitals (activity 4.3.3) and take this opportunity to distribute the user manual.
   - Strengthen supervision activities by including a manager in the supervision team in order to better evaluate the stocks management by TTCs (activity 5.2.1).
   - Evaluate consumption and use of TB drugs during each quarterly meeting organized by the NTCP at TB TCs and TTCs (activity 4.3.2). This evaluation will also be performed during the quarterly meetings of the regions and districts.

   As mentioned above, the SIGL is currently being used manually. To make its use more effective, it will be computerized by adopting a stock management software application from the Ministry of Health (Channel 2). A trial phase is planned for the end of the year.

iv. Involvement of districts in drug management: The drug management officers of health districts are not currently involved in the management of TB drugs.
The NTCP will ask the DGS to send a memorandum to the directors of the regions and health districts so that they fully involve staff responsible for drug management in their area of responsibility. It is expected that this memorandum will have an impact on the involvement of pharmacists in the management of TB drugs.

v. Illegal pharmaceutical market: It has been reported that TB drugs are illegally being sold freely on this market. Côte d'Ivoire has established a National Committee to Tackle the Illegal Trafficking and Counterfeiting of Medicine, known as COTRAMED, pursuant to Decree no. 2012-557 of 5 August 2013 (Annex 9). This multisectoral committee, which was established in July 2014 and whose general secretary is the DPML, is responsible for guaranteeing the health of populations in order to combat the trafficking of counterfeit medicines more effectively. To this end, it is necessary to create a mechanism for meetings between the national TB, HIV/AIDS and malaria control programs on the one hand, and representatives of CONTRAMED on the other hand. This will give greater prominence to the drugs used to treat these three diseases on the committee's agenda.

It is planned that a National Commission to Coordinate the Supply of Essential Medicines and Strategic Health Products (CNCAM) will be established. This Commission will be made up of several technical committees, including one for drugs and products associated with HIV, TB and hepatitis, which will be responsible for: i) quantification, ii) the early warning system, iii) the prevention of expiries and stock-outs, iv) monitoring and logistics. The order to establish this Commission is in the process of being signed. In parallel with this Commission, a core working group made up of the NTCP, the new PSP-CI and the PNDAP (National Program for the Development of Pharmaceutical Activities) will be responsible for i) regularly reviewing the quantification of TB drugs, ii) monitoring the supply plan and iii) monitoring data concerning the consumption and management of stock by peripheral facilities and should anticipate and/or help to control this risk (see the action plan; Annex 10 and Annex 11). It is planned that this group will meet once every quarter.

The establishment of a pharmacovigilance system, which is under way, will make it possible to determine the frequency of side effects associated with second-line and also first-line TB drugs. An unusual frequency of side effects associated with first-line drugs will trigger investigations with regard to the quality and safety of the drugs.

Risk of non-rational use or misappropriation of equipment and resources procured through Global Fund grants:
Physical inventories of program resources and equipment are carried out on a sectoral basis by chief doctors at TTCs. The twice-yearly inventory of resources and equipment used by the CCM, the PRs and the sub-recipients will make it possible to control this risk.

Risk of duplication or substitution of resources and activities

The lack of a map of financial support for sites broken down by partner and the non-existence of a consolidated action plan that takes account of the financial contributions of all partners for supervision activities pose a risk of duplication of funding with other partners intervening in relation to other diseases. The lack of a database for proper monitoring of trained persons poses a risk of duplication of training for participants.
The CCM will launch a map of financial support from all partners intervening in relation to the three diseases and a management tool for trained persons and/or training received in each area (prior to grant implementation).

Risks of monitoring of field activities coming to a halt
The fleet of vehicles of the PRs is inadequate, leading to overuse with the risk that the condition of vehicles will deteriorate faster than normal due to frequent breakdowns. Strengthening of the fleet of vehicles of the CCM and the PRs and the provision of vehicles to the civil society coordination network will make it possible to control the risk of field activities coming to a halt.

CORE TABLES, CCM ELIGIBILITY AND ENDORSEMENT OF THE CONCEPT NOTE

Before submitting the concept note, ensure that all the core tables, CCM eligibility and endorsement of the concept note shown below have been filled in using the online grant management platform or, in exceptional cases, attached to the application using the offline templates provided. These documents can only be submitted by email if the applicant receives Secretariat permission to do so.

- Table 1: Financial Gap Analysis and Counterpart Financing Table
- Table 2: Programmatic Gap Table
- Table 3: Modular Template
- Table 4: List of Abbreviations and Annexes
- Eligibility Requirements
- CCM Endorsement of Concept Note